```
tttgccttca cgggagtaga aggaggcggc gtccgccgcg gccgacggta gttcgcttcc
540
ccgagagtgc gcggaggccc gggtgcgagg agggcctgtt tctcttcagc cctggttcat
600
tcacctcgcg gaccgagggc ccgccgtcag gagccggcga ccgtgccctg gtgcgagctg
660
gtctgtatgt cctcactggt cctttggga ctttgccttg gcctcgttgc tctcaggatt
720
ccgggaaaag gccggtctag ctggtctgag ttagcgaagg gcctgacccc aaaagtggat
780
tttcctcgtt ccgaatt
797


<210> 5974
<211> 107
<212> PRT
<213> Homo sapiens

<400> 5974
Met Glu Gly Ser Gly Thr Gly Lys Arg Arg Gly Lys Ala Ala Lys Thr
1               5                   10                  15
Ser Leu Arg Ile Met Asp Ala Arg Ala Gln Leu Leu Leu Arg Val Pro
            20                  25                  30
His Pro Gly Pro Ser Leu Thr Ser Gly Ala Leu Thr His Ile Arg Asp
        35                  40                  45
Pro His Pro Gly Leu Ser Pro Thr Ser Gly Thr Thr Leu Met Pro Gly Arg
    50                  55                  60
Arg Arg Gly Gly Pro Ser Phe Gly Thr Pro Ala Leu Arg Arg Arg Lys
65                  70                  75                  80
Cys His Arg Glu Ala Pro Ser Gly Leu Ser Thr Ala Ala Arg Glu
                85                  90                  95
Arg Leu Trp Trp Pro Arg Ala Arg Val Cys Arg
            100                 105


<210> 5975
<211> 2175
<212> DNA
<213> Homo sapiens

<400> 5975
nntcaggtca ccacatacta ttatgttggg tttgcatatt tgatgatgcg tcgttaccag
60
gatgccatcc gggtcttcgc caacatcctc ctctacatcc agaggaccaa gagcatgttc
120
cagagggcca cgtacaagta tgagatgatt aacaagcaga atgagcagat gcatgcgctg
180
ctggccattg ccctcacgat gtacccatg cgtatcgatg agagcattca cctccagctg
240
cgggagaaat atgggggacaa gatgttgcgc atgtcttatc ccgctgatga ttatgagtct
300
gaggcggctt atgacccta cgcttatccc agcgactatg atatgcacac aggagatcca
360
aagcaggacc ttgcttatga acgtcagtat gaacagcaaa cctatcaggt gatccctgag
420
```

```
gtgatcaaaa acttcatcca gtatttccac aaaactgtct cagatttgat tgaccagaaa
480
gtgtatgagc tacaggccag tcgtgtctcc agtgatgtca ttgaccagaa ggtgtatgag
540
atccaggaca tctatgagaa cagctggacc aagctgactg aaagattctt caagaataca
600
ccttggcccg aggctgaagc cattgctcca caggttggca atgatgctgt cttcctgatt
660
ttatacaaag aattatacta caggcacata tatgccaaag tcagtggggg accttccttg
720
gagcagaggt ttgaatccta ttacaactac tgcaatctct tcaactacat tcttaatgcc
780
gatggtcctg ctccccttga actacccaac cagtggctct gggatattat cgatgagttc
840
atctaccagt ttcagtcatt cagtcagtac cgctgtaaga ctgccaagaa gtcagaggag
900
gagattgact ttcttcgttc caatcccaaa atctggaatg ttcatagtgt cctcaatgtc
960
cttcattccc tggtagacaa atccaacatc aaccgacagt tggaggtata cacaagcgga
1020
ggtgaccctg agagtgtggc tggggagtat gggcggcact ccctctacaa aatgcttggt
1080
tacttcagcc tggtcgggct tctccgcctg cactccctgt taggagatta ctaccaggcc
1140
atcaaggtgc tggagaacat cgaactgaac aagaagagta tgtattcccg tgtgccagag
1200
tgccaggtca ccacatacta ttatgttggg tttgcatatt tgatgatgcg tcgttaccag
1260
gatgccatcc gggtcttcgc caacatcctc ctctacatcc agaggaccaa gagcatgttc
1320
cagaggacca cgtacaagta tgagatgatt aacaagcaga atgagcagat gcatgcgctg
1380
ctggccattg ccctcacgat gtaccccatg cgtatcgatg agagcattca cctccagctg
1440
cgggagaaat atgggggacaa gatgttgcgc atgcagaaag gtgacccaca agtctatgaa
1500
gaacttttca gttactcctg ccccaagttc ctgtcgcctg tagtgcccaa ctatgataat
1560
gtgcacccca actaccacaa agagcccttc ctgcagcagc tgaaggtgtt ttctgatgaa
1620
gtacagcagc aggcccagct ttcaaccatc cgcagcttcc tgaagctcta caccaccatg
1680
cctgtggcca agctggctgg cttcctggac ctcacagagc aggagttccg gatccagctt
1740
cttgtcttca aacacaagat gaagaacctc gtgtggacca gcggtatctc agccctggat
1800
ggtgaatttc agtcagcctc agaggttgac ttctacattg ataaggacat gatccacatc
1860
gcggacacca aggtcgccag gcgttatggg gatttcttca tccgtcagat ccacaaattt
1920
gaggagctta atcgaaccct gaagaagatg ggacagagac cttgatgata ttcacacaca
1980
ttcaggaacc tgttttgatg tattataggc aggaagtgtt tttgctaccg tgaaaccttt
2040
```

```
acctagatca gccatcagcc tgtcaactca gttaacaagt taaggaccga agtgtttcaa
2100
gtggatctca gtaaggatc tttggagcca gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2160
aaaaaaaaaa aaaaa
2175
```

```
<210> 5976
<211> 564
<212> PRT
<213> Homo sapiens
```

```
<400> 5976
Met Ser Tyr Pro Ala Asp Asp Tyr Glu Ser Glu Ala Ala Tyr Asp Pro
1               5                   10                  15
Tyr Ala Tyr Pro Ser Asp Tyr Asp Met His Thr Gly Asp Pro Lys Gln
            20                  25                  30
Asp Leu Ala Tyr Glu Arg Gln Tyr Glu Gln Gln Thr Tyr Gln Val Ile
        35                  40                  45
Pro Glu Val Ile Lys Asn Phe Ile Gln Tyr Phe His Lys Thr Val Ser
    50                  55                  60
Asp Leu Ile Asp Gln Lys Val Ile Tyr Glu Leu Gln Ala Ser Arg Val Ser
65                  70                  75                  80
Ser Asp Val Ile Asp Gln Lys Val Tyr Glu Ile Gln Asp Ile Tyr Glu
            85                  90                  95
Asn Ser Trp Thr Lys Leu Thr Glu Arg Phe Phe Lys Asn Thr Pro Trp
            100                 105                 110
Pro Glu Ala Glu Ala Ile Ala Pro Gln Val Gly Asn Asp Ala Val Phe
        115                 120                 125
Leu Ile Leu Tyr Lys Glu Leu Tyr Tyr Arg His Ile Tyr Ala Lys Val
    130                 135                 140
Ser Gly Gly Pro Ser Leu Glu Gln Arg Phe Glu Ser Tyr Tyr Asn Tyr
145                 150                 155                 160
Cys Asn Leu Phe Asn Tyr Ile Leu Asn Ala Asp Gly Pro Ala Pro Leu
            165                 170                 175
Glu Leu Pro Asn Gln Trp Leu Trp Asp Ile Ile Asp Glu Phe Ile Tyr
            180                 185                 190
Gln Phe Gln Ser Phe Ser Gln Tyr Arg Cys Lys Thr Ala Lys Lys Ser
        195                 200                 205
Glu Glu Glu Ile Asp Phe Leu Arg Ser Asn Pro Lys Ile Trp Asn Val
    210                 215                 220
His Ser Val Leu Asn Val Leu His Ser Leu Val Asp Lys Ser Asn Ile
225                 230                 235                 240
Asn Arg Gln Leu Glu Val Tyr Thr Ser Gly Gly Asp Pro Glu Ser Val
            245                 250                 255
Ala Gly Glu Tyr Gly Arg His Ser Leu Tyr Lys Met Leu Gly Tyr Phe
            260                 265                 270
Ser Leu Val Gly Leu Leu Arg Leu His Ser Leu Leu Gly Asp Tyr Tyr
        275                 280                 285
Gln Ala Ile Glu Lys Val Leu Glu Asn Ile Glu Leu Asn Lys Lys Ser Met
    290                 295                 300
Tyr Ser Arg Val Pro Glu Cys Gln Val Thr Thr Tyr Tyr Tyr Val Gly
305                 310                 315                 320
Phe Ala Tyr Leu Met Met Arg Arg Tyr Gln Asp Ala Ile Arg Val Phe
```

```
                    325                 330                 335
Ala Asn Ile Leu Leu Tyr Ile Gln Arg Thr Lys Ser Met Phe Gln Arg
            340                 345                 350
Thr Thr Tyr Lys Tyr Glu Met Ile Asn Lys Gln Asn Glu Gln Met His
            355                 360                 365
Ala Leu Leu Ala Ile Ala Leu Thr Met Tyr Pro Met Arg Ile Asp Glu
    370                 375                 380
Ser Ile His Leu Gln Leu Arg Glu Lys Tyr Gly Asp Lys Met Leu Arg
385                 390                 395                 400
Met Gln Lys Gly Asp Pro Gln Val Tyr Glu Glu Leu Phe Ser Tyr Ser
            405                 410                 415
Cys Pro Lys Phe Leu Ser Pro Val Val Pro Asn Tyr Asp Asn Val His
            420                 425                 430
Pro Asn Tyr His Lys Glu Pro Phe Leu Gln Gln Leu Lys Val Phe Ser
    435                 440                 445
Asp Glu Val Gln Gln Gln Ala Gln Leu Ser Thr Ile Arg Ser Phe Leu
    450                 455                 460
Lys Leu Tyr Thr Thr Met Pro Val Ala Lys Leu Ala Gly Phe Leu Asp
465                 470                 475                 480
Leu Thr Glu Gln Glu Phe Arg Ile Gln Leu Leu Val Phe Lys His Lys
            485                 490                 495
Met Lys Asn Leu Val Trp Thr Ser Gly Ile Ser Ala Leu Asp Gly Glu
    500                 505                 510
Phe Gln Ser Ala Ser Glu Val Asp Phe Tyr Ile Asp Lys Asp Met Ile
    515                 520                 525
His Ile Ala Asp Thr Lys Val Ala Arg Arg Tyr Gly Asp Phe Phe Ile
    530                 535                 540
Arg Gln Ile His Lys Phe Glu Glu Leu Asn Arg Thr Leu Lys Lys Met
545                 550                 555                 560
Gly Gln Arg Pro
```

<210> 5977
<211> 2320
<212> DNA
<213> Homo sapiens

<400> 5977
naactttctt tagatttgtc tttgcttttt ccaacttcct ttatttctat tatacttata
60
attttgcttt ttgccctatc tttcattaga aacttttcgc aaatgtctgt taaatgctac
120
cccagtgact ttgggcttgg tcatgctact tgctttggtc aatgaaatgt gagtagacat
180
caagtatacc accatcacac agaaatttta ttttttattt tattttttat agagacaggg
240
tctcactaca ttgcctagat tggtctcaaa ctcctgggct caagcaatct tcctcttctt
300
ggcctcccaa agtgttggga ttgcaggtgt gcgccactac gcccagcttg aaaaattttt
360
taatgcatgt ggtaatccac aggagatcac atttagtata tgaccaagtt aattaagaag
420
tcaaaaaaca cgttaaattt aagcagaata aggctgggt cggtggctca tgcctgtgat
480

```
cccagcactt tgggaggcag aggtgggcag atcattnagg ccaggagttc gagaccagcc
540
tggacaacat ggcganaagt ctttactaaa aatacaaaaa tcagctgggc gtggtggtac
600
acaccgtga tcccagctac tcaggaggct taggcacatg atncgcttga acctgggaga
660
tggaagctgc agtaagctag atcctgccac tgtactccag cctgggtgac agatcaagac
720
tctaactaaa aaacccccca aaaaacaaat agttacttgg aaaacttccg acatttattt
780
acttctggac aaacaaatga gtgggaagaa tcaagtatac acctcttaat tgtatttttt
840
ttttttttttg agacagagtc ttgctctgtc gcccaggctg gagtacagtg gacgatctca
900
gctcactgca acctttgcct cccgggttca ggtgattctc ctgcctcagc ctcccgagta
960
gccgggatta taggcatgga gaaccacacc tggctagttt ttgtattttt agtagagatg
1020
aagtttcacc atgttggcct ggctggtctc aaactcctga cctcaagtga tctgcccgcc
1080
tggtctccta aagtgttggg attacaggcg tgagccaccg tgcctggcca atgttagttt
1140
ttatccttaa aattgcctga gttcttagaa cacagaaaaa acaaatttga atgcattttt
1200
aacagcttaa taatttatat gtcccattat gattttagcg gaatgtttta aagcaaagca
1260
taattcactg caaagataaa cctgaaaaag caaacaaact tacaaatggt atgttatgac
1320
ctagacaaaa ctgattatca actagtaata ctcataatta gcacatgcaa cagattgaga
1380
aattaaatcc tgtgctatat actcttaagt attttgtcag atatatcttt aaatgttcta
1440
tcaattgcat tcctttccac acatatttta aacaagaaaa caattgtctt tcctccagat
1500
tctcatgttt atcagtgcaa aacgttgcaa tctcagtaaa aatggtttat tacaatgtta
1560
ttttagaaag gcttagtcct caaactgttg aaaatgtact taaaagatgt ccaaatcatg
1620
agaatgatca acttcaatgg cttcctctgc ctccaacttg gcttctgcat gtccttcctg
1680
tgactcatca agagaggcca aggcctcatt cgtgtcactt gcaaaagttt ctcgtgatgt
1740
atcatcatct tcttgaaaat ttagacttttt aatagcttgt ttcatcttttt tccccaacac
1800
ttgtgttctc ctcttcctag cagctttttt atttttcatat tccttttggt tttcaatgta
1860
gaaaatgtcc ttaatttgtt cctcgctgat actaggagtg tttttcaaga gattcagaaa
1920
aactccacct ggtgttcttc ttcgactacc attcattata aagagaccac cattttgttc
1980
aacttcagcg gtttccatca gaagttcaat tgcctttttg ttaccaataa tcctcactac
2040
tcgggctatc aggtctttct ttggttcctg taacctgaat gaaatttcat cagccacttt
2100
```

```
ctcttgagaa tcttccgctg tgatctcgta tcgaccttta tagttcattt ctggtctgtt
2160
ccctagcctg tctttgacag gtcgtttcct tttgagatga ccttgcccat tttcctcttc
2220
ctttgatccc atttttttgc caccatgcat atattcatct agttccttgt ctagatcctt
2280
tgtatgctct tgagattcct tcctaagttt cttggcaagc
2320
```

```
<210> 5978
<211> 77
<212> PRT
<213> Homo sapiens
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```
<400> 5978
Met Thr Lys Leu Ile Lys Lys Ser Lys Asn Thr Leu Asn Leu Ser Arg
1               5                   10                  15
Ile Arg Leu Gly Ser Val Ala His Ala Cys Asp Pro Ser Thr Leu Gly
            20                  25                  30
Gly Arg Gly Gly Gln Ile Ile Xaa Ala Arg Ser Ser Arg Pro Ala Trp
        35                  40                  45
Thr Thr Trp Arg Xaa Val Phe Thr Lys Asn Thr Lys Ile Ser Trp Ala
    50                  55                  60
Trp Trp Tyr Thr Pro Val Ile Pro Ala Thr Gln Glu Ala
65                  70                  75
```

```
<210> 5979
<211> 1095
<212> DNA
<213> Homo sapiens
```

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<400> 5979
nntttctttt ttgagacgac gtcttgctct gtcacccagg ctagagtgca atggcacgat
60
ctcggctcac tgtagccttg acctcctggg ctcaagcgat ctccgcctca gcctcccgag
120
tagctgcgac cacaggcctg tgcagcactc ctggcttgct gcccattgta tagatgagga
180
aattgaggcc taaggcaggg tcacttgcct ggccccttcc ccttcacccg tcagagtcca
240
gacagggagg ggacgtcccc tgaccccgc tgctctgtgc tttcagggca agaagactat
300
gaccggctgc ggccctgtc ctaccagaac acccacctcg tgctcatctg ctatgacgtc
360
atgaatccca ccagctacga caacgtcctc atcaagtggt tccctgaggt cacgcatttc
420
tgccgcggga tccccatggt gctcatcggc tgcaagacag acctgaggaa ggacaaggag
480
cagctgcgga agctccgggc cgcccagctg gagcccatca cctacatgca gggcctgagc
540
gcctgcgaac agatccgagc tgctctctac ctggaatgtt ccgccaagtt tcgggagaat
600
gtggaggacg tcttccggga ggccgccaag gtggctctca gcgctctgaa gaaggcgcaa
660
```

cggcagaaga agcgccggct ctgcctgctg ctctgaccca gggcagacag acctcacgac
720
agcactgaca gggcccgggg gcccaggtgc cgattgcacc agggaggctg ccccatcccg
780
accctccagc tcatggtgtc tggggcctgc ggctagactc ttggaacatt ctggaactct
840
ctcctttcct ggctggggct ctgaccacaa actccctcc aggctgcccc tgggacatgg
900
tggtgatgtg ggtgcaggag ccagtgtctg ttgttgggac tcgcaagtgc cctcatcaca
960
gccaccccca ccacgagtgt ctccccagtg cagactcaag ttatgcttga aatgaaaaag
1020
tctatctggt agtgggtaaa aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1080
aaaaaaaaaa aaaaa
1095

<210> 5980
<211> 169
<212> PRT
<213> Homo sapiens

<400> 5980
Gly Leu Arg Gln Gly His Leu Pro Gly Pro Phe Pro Phe Thr Arg Gln
 1   5   10   15
Ser Pro Asp Arg Glu Gly Thr Ser Arg Asp Pro Arg Cys Ser Val Leu
                20   25   30
Ser Gly Gln Glu Asp Tyr Asp Arg Leu Arg Pro Leu Ser Tyr Gln Asn
        35   40   45
Thr His Leu Val Leu Ile Cys Tyr Asp Val Met Asn Pro Thr Ser Tyr
    50   55   60
Asp Asn Val Leu Ile Lys Trp Phe Pro Glu Val Thr His Phe Cys Arg
65   70   75   80
Gly Ile Pro Met Val Leu Ile Gly Cys Lys Thr Asp Leu Arg Lys Asp
                85   90   95
Lys Glu Gln Leu Arg Lys Leu Arg Ala Ala Gln Leu Glu Pro Ile Thr
            100   105   110
Tyr Met Gln Gly Leu Ser Ala Cys Glu Gln Ile Arg Ala Ala Leu Tyr
        115   120   125
Leu Glu Cys Ser Ala Lys Phe Arg Glu Asn Val Glu Ala Val Phe Arg
    130   135   140
Glu Ala Ala Lys Val Ala Leu Ser Ala Leu Lys Lys Ala Gln Arg Gln
145   150   155   160
Lys Lys Arg Arg Leu Cys Leu Leu Leu
                165

<210> 5981
<211> 677
<212> DNA
<213> Homo sapiens

<400> 5981
cgcttccccc agccctgcg cccggcccga acgagaggtc cggagccccg gcgcgggcgg
60

```
gttctggggt gtagacgctg ctggccagcc ctccccagcc gaggttctcg gcaccgcctt
120
gagagcttca gctgccccag ggtgtgcagg tttgctttag agggtcggcg ggcggagctt
180
cggggaagag gagctctggg agagtcattc cggccagtgc gagtaccgtc gtcgctcttg
240
ggaatccttg gccgcccaga cagaagggaa gtaggcgccg gagacccgtt ctgcattttg
300
attcatctcg ggccctgtaa gggtcatatc ttgtgaaaat aacctgtaaa atcaatttaa
360
cgttcagtgc agcgtgtaaa gacagctcta agaatttaaa agacgcctga gtcagaacat
420
ttaaatgctt gggtccctgt agcagcgttt taacacgtct gagtgcagag ggtggagaat
480
cgagcctgat tgccgttcac gccctgtaac ctttaagaag ggtaaagaaa ggcaccctaa
540
aaaacgcaag gggacactta ccctaggggt ggacgaacag ctagcttttt ggaatttggg
600
ttggtcttca tttccaagtg cgaaatttgc ctgcaaaact ttttatttgc agtcatagat
660
caacgataaa cagaatt
677


<210> 5982
<211> 98
<212> PRT
<213> Homo sapiens

<400> 5982
Met Gln Asn Gly Ser Pro Ala Pro Thr Ser Leu Leu Ser Gly Arg Pro
1               5                   10                  15
Arg Ile Pro Lys Ser Asp Asp Gly Thr Arg Thr Gly Arg Asn Asp Ser
            20                  25                  30
Pro Arg Ala Pro Leu Pro Arg Ser Ser Ala Arg Arg Pro Ser Lys Ala
        35                  40                  45
Asn Leu His Thr Leu Gly Gln Leu Lys Leu Ser Arg Arg Cys Arg Glu
    50                  55                  60
Pro Arg Leu Gly Arg Ala Gly Gln Gln Arg Leu His Pro Arg Thr Arg
65                  70                  75                  80
Pro Arg Arg Gly Ser Gly Pro Leu Val Arg Ala Gly Arg Arg Gly Trp
                85                  90                  95
Gly Lys


<210> 5983
<211> 790
<212> DNA
<213> Homo sapiens

<400> 5983
gctcgacata tacagaatat ttcttcccca gaaagttctc caggaataaa gagacgcact
60
tatagtcaag aggtaagaag ttaacttaaa aagggtgaat tggtagtttt tttcctatta
120
```

```
cattgttttc cttaaattac tggtaaattt tgaaataaac agtcccaaga tgtgattatt
180
tgtgtaattt tttttttaa tttgtaaaca gggatatgac agatcttcaa ccatgttaac
240
attggggcct tttagaaatt ctaatttaac tgaactgggt ctgcaagaaa taaagactat
300
tggttatacg agccctagga gtaggactga agtcaacagg cagtgtcctg gagaaaagga
360
acctgtgtca gaccttcagc taggactcga tgcagttgag ccaactgccc tacataaaac
420
cctggaaacg cctgcacatg acagggctga gcccaacagc caactggact cgactcactc
480
tggacggggc acaatgtatt cttcctgggt aaagagccct gacagaacag gagttaactt
540
ctcagtgaac tccaacttga gggacctgac accctcgcat cagttggagg ttggaggagg
600
cttccgaata agtgagtcaa agtgcctgat gcaggatgat actagaggca tgtttatgga
660
aacaactgtg ttttgtactt ccgaagatgg gcttgtatct ggtttcggac ggactgttaa
720
tgacaatttg atcgacggga attgcacacc ccagaatcca ccacaaaaga aaaaggtttc
780
tctattagaa
790


<210> 5984
<211> 186
<212> PRT
<213> Homo sapiens

<400> 5984
Met Leu Thr Leu Gly Pro Phe Arg Asn Ser Asn Leu Thr Glu Leu Gly
1               5                   10                  15
Leu Gln Glu Ile Lys Thr Ile Gly Tyr Thr Ser Pro Arg Ser Arg Thr
                20                  25                  30
Glu Val Asn Arg Gln Cys Pro Gly Glu Lys Glu Pro Val Ser Asp Leu
            35                  40                  45
Gln Leu Gly Leu Asp Ala Val Glu Pro Thr Ala Leu His Lys Thr Leu
        50                  55                  60
Glu Thr Pro Ala His Asp Arg Ala Glu Pro Asn Ser Gln Leu Asp Ser
65                  70                  75                  80
Thr His Ser Gly Arg Gly Thr Met Tyr Ser Ser Trp Val Lys Ser Pro
                85                  90                  95
Asp Arg Thr Gly Val Asn Phe Ser Val Asn Ser Asn Leu Arg Asp Leu
            100                 105                 110
Thr Pro Ser His Gln Leu Glu Val Gly Gly Gly Phe Arg Ile Ser Glu
        115                 120                 125
Ser Lys Cys Leu Met Gln Asp Asp Thr Arg Gly Met Phe Met Glu Thr
    130                 135                 140
Thr Val Phe Cys Thr Ser Glu Asp Gly Leu Val Ser Gly Phe Gly Arg
145                 150                 155                 160
Thr Val Asn Asp Asn Leu Ile Asp Gly Asn Cys Thr Pro Gln Asn Pro
                165                 170                 175
Pro Gln Lys Lys Lys Val Ser Leu Leu Glu
```

                180   185

```
<210> 5985
<211> 737
<212> DNA
<213> Homo sapiens

<400> 5985
tgagcttggt ctttccgggc ctcgcttccc ccagccctg cgcccggccc gaacgagagg
60
ttccggagcc ccggcgcggg cgggttctgg ggtgtgagcg ctgctggcca gcccgcccca
120
gccgaggttc tcggcaccgc cttgagagct tcagctgccc cagggtgtgc agattagaat
180
cccaagaaaa tcaaatggca tccgggggatt tctgctcacc tggagaaggg atggaaatac
240
ttcaacaagt gtgcagcaaa caacttcctc cttgtaacct gagtaaagag gacctgttac
300
agaacccata cttcagcaag cttctcctga atctctcaca gcatgtggat gagagtggct
360
taagcctcac cctagcaaag gagcaggctc aggcatggaa ggaagttcga ctgcataaga
420
caacatggtt gaggtctgag attttacaca gagtcattca agagttgctt gtggactact
480
atgtgaagat acaagacaca aatgtaactt ctgaggacaa aaagtttcat gagacccttg
540
aacagcggct gcttgtaact gaactgatgc ggctcttagg tcctagccag gagagggaga
600
tacctccact gctgggggctg gagaaagcgg accttctgga actcatgcca ctctcagagg
660
ttggcgggga gatattggaa ccaaataaat gaaatggttt aatttctccc atatctttaa
720
aaaaaaaaaa aaaaaaa
737


<210> 5986
<211> 165
<212> PRT
<213> Homo sapiens
```

```
<400> 5986
Met Ala Ser Gly Asp Phe Cys Ser Pro Gly Glu Gly Met Glu Ile Leu
1               5                   10                  15
Gln Gln Val Cys Ser Lys Gln Leu Pro Pro Cys Asn Leu Ser Lys Glu
            20                  25                  30
Asp Leu Leu Gln Asn Pro Tyr Phe Ser Lys Leu Leu Leu Asn Leu Ser
        35                  40                  45
Gln His Val Asp Glu Ser Gly Leu Ser Leu Thr Leu Ala Lys Glu Gln
    50                  55                  60
Ala Gln Ala Trp Lys Glu Val Arg Leu His Lys Thr Thr Trp Leu Arg
65                  70                  75                  80
Ser Glu Ile Leu His Arg Val Ile Gln Glu Leu Leu Val Asp Tyr Tyr
                85                  90                  95
Val Lys Ile Gln Asp Thr Asn Val Thr Ser Glu Asp Lys Lys Phe His
```

```
              100                105                110
Glu Thr Leu Glu Gln Arg Leu Leu Val Thr Glu Leu Met Arg Leu Leu
        115                120                125
Gly Pro Ser Gln Glu Arg Glu Ile Pro Pro Leu Leu Gly Leu Glu Lys
    130                135                140
Ala Asp Leu Leu Glu Leu Met Pro Pro Leu Ser Glu Val Gly Gly Glu Ile
145                150                155                160
Leu Glu Pro Asn Lys
                165
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<210> 5987
<211> 1444
<212> DNA
<213> Homo sapiens

<400> 5987
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120
caccgcgtgg agctttacaa ggtgctgagt tccttggtt accatgtggt caccttgac
180
tacagaggtt ggggtgactc agtgggaacg ccatctgagc ggggcatgac ctatgacgca
240
ctccacgttt ttgactggat caaagcaaga agtggtgaca accccgtgta catctggggc
300
cactctctgg gcactggcgt ggcgacaatc tggtgcggcg cctctgtgag cgagacgcct
360
ccagatgccc ttatattgga atctccattc actaatatcc gcgaagaagc taagagccat
420
ccattttcag tgatatatcg atacttccct gggtttgact ggttcttcct tgatcctatt
480
acaagtagtg gaattaaatt tgcaaatgat gaaaacgtga agcacatctc ctgtcccctg
540
ctcatcctgc acgctgagga cgaccggtg gtgcccttcc agcttggcag aaagctctat
600
agcatcgccg caccagctcg aagcttccga gatttcaaag ttcagtttgt gcccttcat
660
tcagaccttg gctacaggca caaatacatt tacaagagcc ctgagctgcc acggatactg
720
agggaattcc tggggaagtc ggagcctgag caccagcact gagcctggcc gtgggaagga
780
agcatgaaga cctctgccct cctcccgttt tcctccagtc agcagcccgg tatcctgaag
840
ccccgggggg ccggcacctg caatgctcag gagcccagct cgcacctgga gagcacctca
900
gatcccaggt ggggaggccc ctgcaggcct gcagtgcccg gaggcctgag catggctgtg
960
tggaaagcgt gggtggcagg catgtggctc tccttgccgc ccctcaacct gagatcttgt
1020
tgggagactt aatggcagca ggcagccatc actgcctgct tgatgctgca ctgagctgga
1080
cagggggagt ccgggcaggg gactcttggg gctcgggacc atgctgagct ttttggcacc
1140
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acccacagag aacgtggggt ccaggttctt tctgcacctt cccagcacat gcagaatgac
1200
tccagtggtt ccatcgtccc ctcctgccct gtgtacctgc ttgccttct cagctgcccc
1260
acctcccctg ggctggccca ctcacccaca gtggaagtgc ccgggatctg cacttcctcc
1320
cctttcacct acctgtacac ctaacctggc cttagactga gctttatta agaataaaat
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1440
aaaa
1444
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<210> 5988
<211> 216
<212> PRT
<213> Homo sapiens

<400> 5988

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1               5                   10                  15
Tyr His Val Val Thr Phe Asp Tyr Arg Gly Trp Gly Asp Ser Val Gly
                20                  25                  30
Thr Pro Ser Glu Arg Gly Met Thr Tyr Asp Ala Leu His Val Phe Asp
            35                  40                  45
Trp Ile Lys Ala Arg Ser Gly Asp Asn Pro Val Tyr Ile Trp Gly His
        50                  55                  60
Ser Leu Gly Thr Gly Val Ala Thr Ile Trp Cys Gly Ala Ser Val Ser
65                  70                  75                  80
Glu Thr Pro Pro Asp Ala Leu Ile Leu Glu Ser Pro Phe Thr Asn Ile
                85                  90                  95
Arg Glu Glu Ala Lys Ser His Pro Phe Ser Val Ile Tyr Arg Tyr Phe
                100                 105                 110
Pro Gly Phe Asp Trp Phe Phe Leu Asp Pro Ile Thr Ser Ser Gly Ile
            115                 120                 125
Lys Phe Ala Asn Asp Glu Asn Val Lys His Ile Ser Cys Pro Leu Leu
        130                 135                 140
Ile Leu His Ala Glu Asp Asp Pro Val Val Pro Phe Gln Leu Gly Arg
145                 150                 155                 160
Lys Leu Tyr Ser Ile Ala Ala Pro Ala Arg Ser Phe Arg Asp Phe Lys
                165                 170                 175
Val Gln Phe Val Pro Phe His Ser Asp Leu Gly Tyr Arg His Lys Tyr
            180                 185                 190
Ile Tyr Lys Ser Pro Glu Leu Pro Arg Ile Leu Arg Glu Phe Leu Gly
        195                 200                 205
Lys Ser Glu Pro Glu His Gln His
    210                 215
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<210> 5989
<211> 1583
<212> DNA
<213> Homo sapiens

<400> 5989

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120
tgagccttat accgatcaat ctaggcacac ctcctttcct gggggtgact gaatgcccag
180
ccaggqacgc gacgtctctg gccagcagaa atacggcctc ctccccgccg actgggcaaa
240
gggggacagc aagtgtccca tcacccaccc atctcctgct tctactgtga gtgcgaggag
300
aagagactgt gcgtcaacac tcatgtatgg accaaaagca agttcatggg catgtccgtg
360
ggggtctcta tgataggggga aggtgtgttg aggctcctgg aacacgggga ggagtacgta
420
ttcaccctgc ctagtgccta cgcccggtcc attctcacca tcccgtgggt ggagctcgga
480
ggaaaagtca gcatcaactg tgccaagact gggtactcag cgacagtgat attccacacg
540
aagccttct atggaggqaa agtccacagg gttaccgcag aagtgaagca caacccaacc
600
aacaccattg tttgtaaagc ccatgggqaa tggaatggta ctttagagtt cacctacaac
660
aatggagaaa ccaaagtcat cgacacaacc acactgccag tgtatcccaa gaagatcaga
720
cctcttgaga agcagggacc catggagtcc aggaacctct ggcgggaggt gacccgatac
780
ctgcggctgg gggacattga cgcagccacc gagcagaagc ggcacctgga ggagaagcaa
840
cgggtggagg aacggaagcg cgagaacctc cgcacaccat ggaagcccaa atatttatc
900
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960
ggtgcagagc tttccagtat agccctgttt ttgtaggaat attaaagtag tagagtatca
1020
gggttttgtt ggcattcact gagaccttgt attagcatcc aagaaatgat gagagagaga
1080
gaaattatat actatgaaaa gtgcacccc cacactctgct agaggaatga atttattcaa
1140
gagccattcg gggcacgtgt gtgtacacac cgtatacgtt cacacacatg cactatgtaa
1200
acatctgagt atgattacac atttaaatac tgcactcacc aaggttaaag tgggtaatca
1260
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1320
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1380
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1440
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1500
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1583
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<210> 5990
<211> 260
<212> PRT
<213> Homo sapiens

<400> 5990
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Pro Pro Pro Arg Arg Leu Gly Lys Gly Gly Gln Gln Val Ser His His
            20   25   30
Pro Pro Ile Ser Cys Phe Tyr Cys Glu Cys Glu Glu Lys Arg Leu Cys
        35   40   45
Val Asn Thr His Val Trp Thr Lys Ser Lys Phe Met Gly Met Ser Val
    50   55   60
Gly Val Ser Met Ile Gly Glu Gly Val Leu Arg Leu Leu Glu His Gly
65   70   75   80
Glu Glu Tyr Val Phe Thr Leu Pro Ser Ala Tyr Ala Arg Ser Ile Leu
                85   90   95
Thr Ile Pro Trp Val Glu Leu Gly Gly Lys Val Ser Ile Asn Cys Ala
            100   105   110
Lys Thr Gly Tyr Ser Ala Thr Val Ile Phe His Thr Lys Pro Phe Tyr
        115   120   125
Gly Gly Lys Val His Arg Val Thr Ala Glu Val Lys His Asn Pro Thr
    130   135   140
Asn Thr Ile Val Cys Lys Ala His Gly Glu Trp Asn Gly Thr Leu Glu
145   150   155   160
Phe Thr Tyr Asn Asn Gly Glu Thr Lys Val Ile Asp Thr Thr Thr Leu
                165   170   175
Pro Val Tyr Pro Lys Lys Ile Arg Pro Leu Glu Lys Gln Gly Pro Met
            180   185   190
Glu Ser Arg Asn Leu Trp Arg Glu Val Thr Arg Tyr Leu Arg Leu Gly
        195   200   205
Asp Ile Asp Ala Ala Thr Glu Gln Lys Arg His Leu Glu Glu Lys Gln
    210   215   220
Arg Val Glu Glu Arg Lys Arg Glu Asn Leu Arg Thr Pro Trp Lys Pro
225   230   235   240
Lys Tyr Phe Ile Gln Glu Gly Asp Gly Trp Val Tyr Phe Asn Pro Leu
                245   250   255
Trp Lys Ala His
            260

<210> 5991
<211> 2440
<212> DNA
<213> Homo sapiens

<400> 5991
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120
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180

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300
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360
cacaacgtgg tgcggcccca ggaccagacc gtggtgtttg tggccacgaa gcaccacgcc
420
gagtacctca ctgagctgct gacgacccag ncggtgagct gcgcccacat ctatagtgcc
480
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600
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720
gatctgcacc tgttcctggg ccgctccctc naccctcgcc cgacccctca aggagccctc
780
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960
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1020
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1080
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1380
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1440
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1560
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1620
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1680
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1800
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gccccaggca cccctgcagg ccgagtccgc ccggaactca agaccaagca gcagatcctg
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1920
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1980
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2040
ccttgattgg ccttagggtg ggcatcagca gacgttcccg tgcaccactg tgtgcctggc
2100
cctgtgctgg gcactggggg cactccctgc aggagccatc atctgtgaaa aggagcactg
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2440

<210> 5992
<211> 301
<212> PRT
<213> Homo sapiens

<400> 5992
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Val His Val Ala Val Glu Met Ser Leu Lys Leu Gln Ser Val Glu Tyr
            20   25   30
Val Val Phe Asp Glu Ala Asp Arg Leu Phe Glu Met Gly Phe Ala Glu
        35   40   45
Gln Leu Gln Glu Ile Ile Ala Arg Leu Pro Gly Gly His Gln Thr Val
    50   55   60
Leu Phe Ser Ala Thr Leu Pro Lys Leu Leu Val Glu Phe Ala Arg Ala
65   70   75   80
Gly Leu Thr Glu Pro Val Leu Ile Arg Leu Asp Val Asp Thr Lys Leu
                85   90   95
Asn Glu Gln Leu Lys Thr Ser Phe Phe Leu Val Arg Glu Asp Thr Lys
            100   105   110
Ala Ala Val Leu Leu His Leu Leu His Asn Val Val Arg Pro Gln Asp
        115   120   125
Gln Thr Val Val Phe Val Ala Thr Lys His His Ala Glu Tyr Leu Thr
    130   135   140
Glu Leu Leu Thr Thr Gln Xaa Val Ser Cys Ala His Ile Tyr Ser Ala
145   150   155   160
Leu Asp Pro Thr Ala Arg Lys Ile Asn Leu Ala Lys Phe Thr Leu Gly
                165   170   175
Lys Cys Ser Thr Leu Ile Val Thr Asp Leu Ala Ala Arg Gly Leu Asp
            180   185   190
Ile Pro Leu Leu Asp Asn Val Ile Asn Tyr Ser Phe Pro Ala Lys Gly

```
          195                    200                    205
Lys Leu Phe Leu His Arg Val Gly Arg Val Ala Arg Ala Gly Arg Ser
     210                    215                    220
Gly Thr Ala Tyr Ser Leu Val Ala Pro Asp Glu Ile Pro Tyr Leu Leu
225                    230                    235                    240
Asp Leu His Leu Phe Leu Gly Arg Ser Leu Xaa Pro Arg Pro Thr Pro
                    245                    250                    255
Gln Gly Ala Leu Arg Cys Gly Arg Cys Gly Trp His Ala Gly Ser Gly
          260                    265                    270
Ala Thr Glu Cys Gly Gly Arg Gly Gly Gln Trp Ser Ala Glu His Pro
          275                    280                    285
Gly Gly Ile Ala Gly Ala Thr Gly Pro Gly Pro Arg Cys
          290                    295                    300
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<210> 5993
<211> 7858
<212> DNA
<213> Homo sapiens

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120
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180
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240
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480
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660
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780
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1020
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2100
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2220
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2640
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3300
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4260

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5880
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7560

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7680
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7740
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7858


<210> 5994
<211> 402
<212> PRT
<213> Homo sapiens

<400> 5994
Met Ala Leu Ala Asn Lys Pro Leu Arg Arg Phe Lys Gln Glu Pro Glu
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Asp Glu Leu Pro Glu Ala Pro Pro Lys Thr Arg Glu Ser Asp His Ser
            20                  25                  30
Arg Ser Ser Ser Pro Thr Ala Gly Pro Ser Thr Glu Gly Ala Glu Gly
        35                  40                  45
Pro Glu Glu Lys Lys Lys Val Lys Met Arg Arg Lys Arg Arg Leu Pro
    50                  55                  60
Asn Lys Glu Leu Ser Arg Glu Leu Ser Glu Glu Leu Asn His Glu Ile
65                  70                  75                  80
Gln Arg Thr Glu Asn Ser Leu Ala Asn Glu Asn Gln Gln Pro Ile Lys
                85                  90                  95
Ser Glu Pro Glu Ser Glu Gly Glu Glu Pro Lys Arg Pro Pro Gly Ile
            100                 105                 110
Cys Glu Arg Pro His Arg Phe Ser Lys Gly Leu Asn Gly Thr Pro Arg
        115                 120                 125
Glu Leu Arg His Gln Leu Gly Pro Ser Leu Arg Ser Pro Pro Arg Val
    130                 135                 140
Ile Ser Arg Pro Pro Pro Ser Val Ser Pro Pro Lys Cys Ile Gln Met
145                 150                 155                 160
Glu Arg His Val Ile Arg Pro Pro Pro Ile Ser Pro Pro Pro Asp Ser
                165                 170                 175
Leu Pro Leu Asp Asp Gly Ala Ala His Val Met His Arg Glu Val Trp
            180                 185                 190
Met Ala Val Phe Ser Tyr Leu Ser His Gln Asp Leu Cys Val Cys Met
    195                 200                 205
Arg Val Cys Arg Thr Trp Asn Arg Trp Cys Cys Asp Lys Arg Leu Trp
    210                 215                 220
Thr Arg Ile Asp Leu Asn His Cys Lys Ser Ile Thr Pro Leu Met Leu
225                 230                 235                 240
Ser Gly Ile Ile Arg Arg Gln Pro Val Ser Leu Asp Leu Ser Trp Thr
                245                 250                 255
Asn Ile Ser Lys Lys Gln Leu Ser Trp Leu Ile Asn Arg Leu Pro Gly
            260                 265                 270
Leu Arg Asp Leu Val Leu Ser Gly Cys Ser Trp Ile Ala Val Ser Ala
        275                 280                 285
Leu Cys Ser Ser Ser Cys Pro Leu Leu Arg Thr Leu Asp Val Gln Trp
```

```
         290                    295                    300
Val Glu Gly Leu Lys Asp Ala Gln Met Arg Asp Leu Leu Ser Pro Pro
305                    310                    315                    320
Thr Asp Asn Arg Pro Gly Glu Leu Pro Gly Trp Gly Phe Leu Trp Gly
                   325                    330                    335
Trp Gly Glu Arg Ala Arg Leu Leu Asp Leu Leu Pro Ser Asp Ser Pro
                340                    345                    350
Ser Cys Ser Pro Lys Asp Ile Gly Met Ser Leu Cys Cys His Val Leu
         355                    360                    365
Ser Leu Leu Gln Ala Gln Arg Gly Ser Gly Arg Arg Gln Gly Leu Leu
      370                    375                    380
Cys Thr Arg Glu Thr Arg Ser Trp Gly Ser Ala Cys Val Ser Leu Leu
385                    390                    395                    400
Ser Cys
```

<210> 5995
<211> 1528
<212> DNA
<213> Homo sapiens

<400> 5995
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ggtgcgcctt cagtctgtga cattcagttg aaccaggtgt cgcctgctga cttcactgtc
120
ctcagtgatg tgctgccaat gttcagcgtg gacttcagca agcaagtcag cagctcggca
180
gcgtgccata gcaggcagtt tgtacctttg gcgtctggcc aagcacaggt ggttctctcg
240
tggtgggaca ttgaaatgga ccctgagggc aagatcaagt gcaccatggc cccttctgg
300
gcacactcag acccagagga gatgcagtgg cgggaccact ggnatgcagt gtgtgtactt
360
cctgccacaa gaggagcctg tggtgcaggg ctcagcgctc tatctggtag cccaccacga
420
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480
ccagatgcgc cccgtgtgtg actgccaggc tcacctgctc tggaaccggc ctcggtttgg
540
agagatcaat gaccaggaca gaactgatcg atacgtccag gctctgagga ccgtgctgaa
600
gccagacagc gtgtgcctgt gtgtcagcga tggcagcctg ctctccgtgc tggcccatca
660
cctgggggtg gagcaggtgt ttacagtcga gagttcagca gcttctcaca aactgttgag
720
aaaaatcttc aaggctaacc acttggaaga taaaattcac atcatagaga aacggccgga
780
attattaaca aatgaggacc tacagggcag aaaggtctct ctcctcctgg gcgagccgtt
840
cttcactacc agcctgctgc cgtcgcgcaa cctctacttc tggtacgtgc ggaccgctgt
900
ggaccagcac ctgggccag gtgccatggt gatgcccag gcagcctcgc tgcacgctgt
960
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ggttgtggag ttcaggggacc tgtggcggat ccggagcccc tgtggtgact gcgaaggctt
1020
cgacgtgcac atcatggacg acatgattaa gcgtgccctg gacttcaggg agagcaggga
1080
agctgagccc cacccgctgt gggagtaccc atgccgcagc ctctccgagc cctggcagat
1140
cctgaccttt gacttccagc agccggtgcc cctgcagccc ctgtgtgccg agggcaccgt
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1260
cccggagtgc acgctcagca ctggcctcct ggagcctgca gaccccgagg ggggctgctg
1320
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1380
actgctgggt ggccacggga ctgtcagcta tgcagtggag tttcaccccg acacaggcga
1440
catcatcatg gagttcaggc atgcagatac cccagactga ccactcttga gcaataaagt
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1528
```

```
<210> 5996
<211> 140
<212> PRT
<213> Homo sapiens
```

```
<400> 5996
Xaa Arg Thr Ser Leu Gly Glu Gln Val Ile Val Pro Pro Ser Glu Met
1               5                   10                  15
Glu Arg Cys Pro Gly Ala Pro Ser Val Cys Asp Ile Gln Leu Asn Gln
            20                  25                  30
Val Ser Pro Ala Asp Phe Thr Val Leu Ser Asp Val Leu Pro Met Phe
        35                  40                  45
Ser Val Asp Phe Ser Lys Gln Val Ser Ser Ser Ala Ala Cys His Ser
    50                  55                  60
Arg Gln Phe Val Pro Leu Ala Ser Gly Gln Ala Gln Val Val Leu Ser
65                  70                  75                  80
Trp Trp Asp Ile Glu Met Asp Pro Glu Gly Lys Ile Lys Cys Thr Met
                85                  90                  95
Ala Pro Phe Trp Ala His Ser Asp Pro Glu Glu Met Gln Trp Arg Asp
            100                 105                 110
His Trp Xaa Ala Val Cys Val Leu Pro Ala Thr Arg Gly Ala Cys Gly
        115                 120                 125
Ala Gly Leu Ser Ala Leu Ser Gly Ser Pro Pro Arg
    130                 135                 140
```

```
<210> 5997
<211> 1759
<212> DNA
<213> Homo sapiens
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<400> 5997
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60
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gtcttaatac ttgaacatca agtgtattca tgaacagtga gtatcttatc ttcatgtaaa
120
cagttctaga tggaagaccc agatggcact cctcccgggg aggggttcca gcccccaccc
180
tctcagcccc tcccctgcca gctcaactct gcagtacacg atggggggaag gcttaaacgc
240
agctgccagg tgtaattttt caagtgtcaa agatcccaag tgatccctga cacccacccc
300
ttcctactct tacattcatg cgtctgtaag atagctgcct acaacaggtc agtagtgatg
360
ctccgatcag aaaaacaaga tacaaaacaa acaacaaaca cacttggtcc cttcagacca
420
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480
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540
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600
cacatccagc tggaagcctt gttggcccct aagcctttgt ttcatgctac agtactgagg
660
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720
tattcccca cctccacctt aggtggctgc ctcagttttc caaccactgg aatcagtccc
780
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1020
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1080
ccacgctgtg gcagctcttg ccctgctcca cgcagacgtc cagcagcgcc ccccgcaggc
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1200
taggcatcag caggcgcgca gggcgtcgag agcccagccg cgcctgggcc aggctctcct
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1320
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1380
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1440
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1560
tggtgaggac agacgccagg gcgtttgctg atgaactcag agtgccggag cgtagaagcc
1620
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1680
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gcgaaccgt gccaaccacc gagagccgcc cagacccgtc ccaggtccac gctcgcacct
1740
ccccccctt gccgaattc
1759

<210> 5998
<211> 72
<212> PRT
<213> Homo sapiens

<400> 5998
Thr Ala Pro Gly Ser Trp Ala Arg Val Val Ser Pro Gly Ala Ala Arg
 1   5   10   15
Gly Ser Ala Gly Arg Trp Ala Pro Gly Trp Gly Arg Val Pro Ala Gly
                20   25   30
Pro Arg Cys Gly Ser Ser Cys Pro Ala Pro Arg Arg Arg Pro Ala Ala
         35   40   45
Pro Pro Ala Gly Arg Thr Ala Arg Cys Arg Pro Gly Ala Val Val Leu
     50   55   60
Cys Pro Pro Gly Leu Pro Thr Gly
65   70

<210> 5999
<211> 2759
<212> DNA
<213> Homo sapiens

<400> 5999
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120
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240
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420
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540
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720
cccaccttgc tggtctcagt tgtcaggatc attgaaaggg aagagaaaat tgacaggcgc
780

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900
gataccagag agtctgacaa gatgtggctt gtccgccacc tggaaattat aaggaagtac
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1020
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1320
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1380
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1560
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1620
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2160
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2280
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2400
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2700
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2759
```

```
<210> 6000
<211> 757
<212> PRT
<213> Homo sapiens
```

```
<400> 6000
His Glu Gln Cys Glu Asp Ser Thr Ser Phe Phe Thr Met Lys Glu Thr
1               5                   10                  15
Asp Arg Glu Ala Val Ala Thr Ala Val Gln Arg Val Ala Gly Met Leu
            20                  25                  30
Gln Arg Pro Asp Gln Leu Asp Lys Val Glu Gln Tyr Arg Arg Arg Glu
        35                  40                  45
Ala Arg Lys Lys Ala Ser Val Glu Ala Arg Leu Lys Ala Ala Ile Gln
    50                  55                  60
Ser Gln Leu Asp Gly Val Arg Thr Gly Leu Ser Gln Leu His Asn Ala
65                  70                  75                  80
Leu Asn Asp Val Lys Asp Ile Gln Gln Ser Leu Ala Asp Val Ser Lys
                85                  90                  95
Asp Trp Arg Gln Ser Ile Asn Thr Ile Glu Ser Leu Lys Asp Val Lys
            100                 105                 110
Asp Ala Val Val Gln His Ser Gln Leu Ala Ala Ala Val Glu Asn Leu
        115                 120                 125
Lys Asn Ile Phe Ser Val Pro Glu Ile Val Arg Glu Thr Gln Asp Leu
    130                 135                 140
Ile Glu Gln Gly Ala Leu Leu Gln Ala His Arg Leu Met Asp Leu
145                 150                 155                 160
Glu Cys Ser Arg Asp Gly Leu Met Tyr Glu Gln Tyr Arg Met Asp Ser
                165                 170                 175
Gly Asn Thr Arg Asp Met Thr Leu Ile His Gly Tyr Phe Gly Ser Thr
            180                 185                 190
Gln Gly Leu Ser Asp Glu Leu Ala Lys Gln Leu Trp Met Val Leu Gln
        195                 200                 205
Arg Ser Leu Val Thr Val Arg Arg Asp Pro Thr Leu Leu Val Ser Val
    210                 215                 220
Val Arg Ile Ile Glu Arg Glu Glu Lys Ile Asp Arg Arg Ile Leu Asp
225                 230                 235                 240
Arg Lys Lys Gln Thr Gly Phe Val Pro Pro Gly Arg Pro Lys Asn Trp
                245                 250                 255
Lys Glu Lys Met Phe Thr Ile Leu Gln Arg Thr Val Thr Thr Arg Ile
            260                 265                 270
Glu Gly Thr Gln Ala Asp Thr Arg Glu Ser Asp Lys Met Trp Leu Val
```

```
         275                    280                    285
Arg His Leu Glu Ile Ile Arg Lys Tyr Val Leu Asp Asp Leu Ile Val
  290                    295                    300
Ala Lys Asn Leu Met Val Gln Cys Phe Pro Pro His Tyr Glu Ile Phe
  305                    310                    315                    320
Lys Asn Leu Leu Asn Met Tyr His Gln Ala Leu Ser Thr Arg Met Gln
                    325                    330                    335
Asp Leu Ala Ser Glu Asp Leu Glu Ala Asn Glu Ile Val Ser Leu Leu
                    340                    345                    350
Thr Trp Val Leu Asn Thr Tyr Thr Ser Thr Glu Met Met Arg Asn Val
                    355                    360                    365
Glu Leu Ala Pro Glu Val Asp Val Gly Thr Leu Glu Pro Leu Leu Ser
  370                    375                    380
Pro His Val Val Ser Glu Leu Leu Asp Thr Tyr Met Ser Thr Leu Thr
  385                    390                    395                    400
Ser Asn Ile Ile Ala Trp Leu Arg Lys Ala Leu Glu Thr Asp Lys Lys
                    405                    410                    415
Asp Trp Val Lys Glu Thr Glu Pro Glu Ala Asp Gln Asp Gly Tyr Tyr
                    420                    425                    430
Gln Thr Thr Leu Pro Ala Ile Val Phe Gln Met Phe Glu Gln Asn Leu
                    435                    440                    445
Gln Val Ala Ala Gln Ile Ser Glu Asp Leu Lys Thr Lys Val Leu Val
  450                    455                    460
Leu Cys Leu Gln Gln Met Asn Ser Phe Leu Ser Arg Tyr Lys Asp Glu
  465                    470                    475                    480
Ala Gln Leu Tyr Lys Glu Glu His Leu Arg Asn Arg Gln His Pro His
                    485                    490                    495
Cys Tyr Val Gln Tyr Met Ile Ala Ile Ile Asn Asn Cys Gln Thr Phe
                    500                    505                    510
Lys Glu Ser Ile Val Ser Leu Lys Arg Lys Tyr Leu Lys Asn Glu Val
  515                    520                    525
Glu Glu Gly Val Ser Pro Ser Gln Pro Ser Met Asp Gly Ile Leu Asp
  530                    535                    540
Ala Ile Ala Lys Glu Gly Cys Ser Gly Leu Leu Glu Glu Val Phe Leu
  545                    550                    555                    560
Asp Leu Glu Gln His Leu Asn Glu Leu Met Thr Lys Lys Trp Leu Leu
                    565                    570                    575
Gly Ser Asn Ala Val Asp Ile Ile Cys Val Thr Val Glu Asp Tyr Phe
                    580                    585                    590
Asn Asp Pro Ala Lys Ile Lys Lys Pro Tyr Lys Lys Ser Arg Met Thr Ala
                    595                    600                    605
Glu Ala His Arg Arg Val Val Val Glu Tyr Leu Arg Ala Val Met Gln
  610                    615                    620
Lys Arg Ile Ser Phe Arg Ser Pro Glu Glu Arg Lys Glu Gly Ala Glu
  625                    630                    635                    640
Lys Met Val Arg Glu Ala Glu Gln Arg Arg Phe Leu Phe Arg Lys Leu
                    645                    650                    655
Ala Ser Gly Phe Gly Glu Asp Val Asp Gly Tyr Cys Asp Thr Ile Val
                    660                    665                    670
Ala Val Ala Glu Val Ile Lys Leu Thr Asp Pro Ser Leu Leu Tyr Leu
                    675                    680                    685
Glu Val Ser Thr Leu Val Ser Lys Tyr Pro Asp Ile Arg Asp Asp His
  690                    695                    700
Ile Gly Ala Leu Leu Ala Val Arg Gly Asp Ala Ser Arg Asp Met Lys
```

```
705                    710                    715                    720
Gln Thr Ile Met Glu Thr Leu Glu Gln Gly Pro Ala Gln Ala Ser Pro
                       725                    730                    735
Ser Tyr Val Pro Leu Phe Lys Asp Ile Val Val Pro Ser Leu Asn Val
                  740                    745                    750
Ala Lys Leu Leu Lys
            755
```

```
<210> 6001
<211> 2490
<212> DNA
<213> Homo sapiens

<400> 6001
nggcgccttt cagctgaaaa acagctcgcg ctgcagcaag ctagctggga agctcccagt
60
tctaaagaga ggctgtttac cagaacagca taacaagggc aggtctgact gcaaggctgg
120
gactgggagg cagagccgcc gccaaggggg cctcggttaa acactggtcg ttcaatcacc
180
tgcaagacga aggaggcaag gatgctgttg gcctgggtac aagcattcct cgtcagcaac
240
atgctcctag cagaagccta tggatctgga ggctgtttct gggacaacgg ccacctgtac
300
cgggaggacc agacctcccc cgcgccgggc ctccgctgcc tcaactggct ggacgcgcag
360
agcgggctgg cctcggcccc cgtgtcgggg gccggcaatc acagttactg ccgaaacccg
420
gacgaggacc ccgcggggc ctggtgctac gtcagtggcg aggccggcgt ccctgagaaa
480
cggccttgcg aggacctgcg ctgtccagag accacctccc aggccctgcc agccttcacg
540
acagaaatcc aggaagcgtc tgaagggcca ggtgcagatg aggtgcaggt gttcgctcct
600
gccaacgccc tgcccgctcg gagtgaggcg gcagctgtgc agccagtgat tgggatcagc
660
cagcgggtgc ggatgaactc caaggagaaa aaggacctgg gaactctggg ctacgtgctg
720
ggcattacca tgatggtgat catcattgcc atcggagctg gcatcatctt gggctactcc
780
tacaagaggg ggaaggattt gaaagaacag catgatcaga aagtatgtga gagggagatg
840
cagcgaatca ctctgcccT gtctgccttc accaacccca cctgtgagat tgtggatgag
900
aagactgtcg tggtccacac cagccagact ccagttgacc ctcaggaggg caccacccc
960
cttatgggcc aggccgggac tcctgggggcc tgagccccc cagtgggcag gagcccatgc
1020
agacactggt gcaggacagc ccaccctcct acagctagga ggaactacca ctttgtgttc
1080
tggttaaaac cctaccactc ccccgctttt ttggcgaatc ctagtaagag tgacagaagc
1140
aggtggccct gtgggctgag ggtaaggctg ggtaggggtcc taacagtgct ccttgtccat
1200
```

```
ccccttggagc agatttttgtc tgtggatgga gacagtggca gctcccacag tgatgctgct
1260
gctaagggct tccaaacatt gcctgcaccc ctggaactga accagggata gacggggagc
1320
tcccccaggc tcctctgtgc tttactaaga tggcctcagt ctccactgtg ggcttgagtg
1380
gcatacactg ttattcatgg ttaaggtaaa gcaggtcaag ggatggcatt gaaaaaatat
1440
atttagtttt taaaatattt gggatggaac tccctactga cctctgagaa ctggaaacga
1500
gtttgtacag aagtcagaac tttgggttgg gaatgagatc taggttgtgg ctgctggtat
1560
gcttcagctt gctggcaatg atgtgccttg acaaccgtgg gccaggcctg ggcccaggga
1620
ctcttcctgt ttcataagga aaggaagaat tgcactgagc attccactta ggaagaggat
1680
agagaaggat ctgctccgcc tttggccaca ggagcagagg cagacctggg atgccccagt
1740
ttctcttcag ggatggatag tgacctgtct tcattttgca caggtaagag agtagttagc
1800
taacctatgg gaattatact gtgggggcctt gtgagctgct tctaagaggc taacctggaa
1860
actaagctca gaggcaaggt aataaagcac ttcagggctt gctccccaag tgggcctgat
1920
ttagcaggtg gtcctgcggg cgtccaggtc agcaccttcc tgtagggcac tggggctagg
1980
gtcacagccc ctaactcata aagcaatcaa agaaccatta gaaagggctc attaagcctt
2040
ttggacacag gaccccagag aggaaaaagt gacttgccca aggtcgtaag caagctactg
2100
gcatggcaag agcccagctt cctgacggag cgcaacattt ctccactgca ctgtgctagc
2160
agctcagcag ggcctctaac ctgtgatgtc acactcaaga ggccttggca gctcctagcc
2220
atagagcttc ctttccagaa cccttccact gcccaatgtg gagacagggg ttagtggggc
2280
tttctatgga gccatctgct ttggggacct agacctcagg tggtctcttg gtgttagtga
2340
tgctggagaa gagaatatta ctggtttcta cttttctata aaggcatttc tctatataca
2400
tgtttatat acctcattct gacacctgca tatagtgtgg gaaattgctc tgcatttgac
2460
ttaattaaaa aaaaaaaaa gactccaaaa
2490


<210> 6002
<211> 263
<212> PRT
<213> Homo sapiens

<400> 6002
Met Leu Leu Ala Trp Val Gln Ala Phe Leu Val Ser Asn Met Leu Leu
 1               5                   10                  15
Ala Glu Ala Tyr Gly Ser Gly Gly Cys Phe Trp Asp Asn Gly His Leu
```

```
              20               25               30
Tyr Arg Glu Asp Gln Thr Ser Pro Ala Pro Gly Leu Arg Cys Leu Asn
         35               40               45
Trp Leu Asp Ala Gln Ser Gly Leu Ala Ser Ala Pro Val Ser Gly Ala
         50               55               60
Gly Asn His Ser Tyr Cys Arg Asn Pro Asp Glu Asp Pro Ala Gly Pro
65               70               75               80
Trp Cys Tyr Val Ser Gly Glu Ala Gly Val Pro Glu Lys Arg Pro Cys
                   85               90               95
Glu Asp Leu Arg Cys Pro Glu Thr Thr Ser Gln Ala Leu Pro Ala Phe
              100              105              110
Thr Thr Glu Ile Gln Glu Ala Ser Glu Gly Pro Gly Ala Asp Glu Val
         115              120              125
Gln Val Phe Ala Pro Ala Asn Ala Leu Pro Ala Arg Ser Glu Ala Ala
         130              135              140
Ala Val Gln Pro Val Ile Gly Ile Ser Gln Arg Val Arg Met Asn Ser
145              150              155              160
Lys Glu Lys Lys Asp Leu Gly Thr Leu Gly Tyr Val Leu Gly Ile Thr
                   165              170              175
Met Met Val Ile Ile Ile Ala Ile Gly Ala Gly Ile Ile Leu Gly Tyr
              180              185              190
Ser Tyr Lys Arg Gly Lys Asp Leu Lys Leu Glu Gln His Asp Lys Lys Val
         195              200              205
Cys Glu Arg Glu Met Gln Arg Ile Thr Leu Pro Leu Ser Ala Phe Thr
         210              215              220
Asn Pro Thr Cys Glu Ile Val Asp Glu Lys Thr Val Val Val His Thr
225              230              235              240
Ser Gln Thr Pro Val Asp Pro Gln Glu Gly Thr Thr Pro Leu Met Gly
                   245              250              255
Gln Ala Gly Thr Pro Gly Ala
              260
```

```
<210> 6003
<211> 3107
<212> DNA
<213> Homo sapiens

<400> 6003
ttttttttt tttttttttt tttttttttt tttttttttt tttttttttca ctatagaaaa
60
ttgacttggt ttattaccgt cactatagaa acaggcgacc tgcttcccta ggtggctccc
120
agcagcgtgg cccacgcttg gacaccccac tccccagaaa tctggactga gaccccaggc
180
ctctgtctgg cttctcacga acagctgtct ggagagcttc acgtgctgga gagctgttgc
240
tccgtcatcg ctcacagagg catgggcccg aatttcagcc ccctctgcct ctccgtccag
300
tggccagcaa tgggctgtcc agcgaagggc ctcgcacaac ctgtcaggga ctggtctggc
360
acgcagccag cgtgaaatcc tcaggttggt tctcttcaga tgtgggaggt gaccgcagcc
420
ctgctccacag agagggtgga aactggcgca ggtgtgggag cagcctccct tcgggagtctc
480
```

```
ctcgaagtac ccagggctct ccccagcgct gcccgccccc agccttctga acacctgcca
540
cgtggatcac aaccttgtcg ctcttctcgt ctcaactaga agcaactgca gcatggccct
600
tcccgatttc caggtgcatg tcgaaaagcg tgcagtggcc ttgtgacgtg gccgggccct
660
tggcaaggaa gtcctggcgg gtatcagcct ctgcactgca ccctggggtgg actgagtcgg
720
ggccaggatt gtgtcagggg aggtggagga gacgcgggga cagccggttc acagcggcct
780
ggacggagca ctccgggggcc agagctgttc tgagacttgg tgcagattca aagattttaa
840
aatgcctggg gctacataag gggcagcact tctcagacga gggcttctga aaggggcatt
900
ccttggcact gagatggaga cggcagtgcc ttttcaccct ctccgtgagg ccttgtgctg
960
tgctcagcct tggtgtgcag agatgggcag aggggaggca gagcctctgc cagacgggta
1020
tgtgggggagc agggttgtgg ccagggcccc cgctctgccc tctcgggatt gcagagctgg
1080
agctcctccc agcttctcat gtgagtctga gtcgtccaca gaagccactg aggccaccag
1140
gaatgagccc ctggtgcccc gctgccacct gcagggtgct ccgtgagctg ggcctgggct
1200
cagtgtgcaa gaggcatctc ctctcacgtg accgtgggct cagatctgcc aacactccgg
1260
agaacagggt agggggcagg ggctgcacga aggagatcct accctccag aggaggtgggg
1320
gcccgaggcc cgggcctgca accctggcca cctgccgacc agcagtgcag ttgtgagcac
1380
gccacctgca gtgacacaca cagcccatgg gtcctactca ggcctccgtg gcctgacttg
1440
ggggctaagg ggagctcagg agaaacccaa agtccagcca gcagggcccc cccacagaca
1500
cccctgcac acacaggcag gggggcctac tgtgtctcat gcatcatcac accggagggc
1560
aaactctgcg tggtgagcct ggccccagcc ggccctccat gaatggtgac cacacccagc
1620
tggtggggcgg tgtggccttg ggtttctggt ggggccacgg gatgcacaga gctgggttct
1680
tgggagacgg tgccaaggcc agctgtcccg aaggtggccc ctggcacaat gcccaccaga
1740
cctgagggag ggactgagac cacctcaatg ctgncagttc ctggggtcac gcagagtcca
1800
cgtgggggaaa ggggcagtgg accccatgcg gtgcagggtg tggctttgcc angcagaggg
1860
agcccgcgtg gccctgggcc cagggctccg ggccgtggca gagactgcgg tgggaatggc
1920
cctgcagagg ccccagcccc cttgtctct gcattccagc cacctgccct gggcccagct
1980
ccaaaggaag ggggcccaag ctctctgaat aaaaggtgca catgaggacc aaggaggcct
2040
gacactgggca ggggacagct ccacctcctc tccccggaca ccccaaaagg cggagacgtt
2100
```

```
cacaagctgt cctgtcggcg gctgctgttt gtggaggagt aaagcatcct agcgagactg
2160
caggctcggt gtacatctga tttactgaat tttaaagtct gggatgttag tggggaagag
2220
gcgaggtgag cattgcgtga cgccgaggac taggcggggc ggggactgca cctggctagg
2280
cacccccacc ctgggcaact tgcccacgga ccccagggca gtgagtagtg acaggaggta
2340
gcccgggggtg agacctctca cagcaagaag atggtgtggt tgctgggggc tccctggaga
2400
gtgtcgtccc tgcggcccct gggaagtgct ccctcacgac ggaaggtttc ctgtcagtgc
2460
ggtcccgggg cctgatagtg gcggtgggcg ggtggggtca cgtgtcctca aggtcctgaa
2520
tgcccagctc tgccccattc ctctgattcc cagtggctgc tagctggacc cagctggtgt
2580
cctgggcatg aaggcagggc caccgtcccc agcaggtgct gccctcctgg ccagctgagc
2640
atcctggcca ccatcagcgt ccaggtgccc ctactcgccc ttcctcttcc tcagaagcct
2700
ttgcggacct gacctgggcc agcttcccgc gattcccctt ccgcttccta tcaacgtcca
2760
ggacccaagc tgccgccccc aggccagccc ttgccacttg gggcccggtc ttcacacgtg
2820
ggagtctgac cggggctcct ccctgaacag tcctgggtct gacgctctca attatcaccc
2880
acggacccac acgacgcccg gctctgggcg gggatggggc cggggctgct gcggggtccc
2940
gccaggcgag gccccagcaa ccaccccatc ttcttgctgt gagaggtctc accccgggct
3000
acctcctgtc actactcagt gccgtggggt ccgtgggcaa gttgcccagg gtggggggtgc
3060
ctagccaggt gcagtccccg ccccgcctag tcctcggcgt cacgcgt
3107
```

```
<210> 6004
<211> 140
<212> PRT
<213> Homo sapiens

<400> 6004
Met Val Thr Thr Pro Ser Trp Trp Ala Val Trp Pro Trp Val Ser Gly
1               5                   10                  15
Gly Ala Thr Gly Cys Thr Glu Leu Gly Ser Trp Glu Thr Val Pro Arg
            20                  25                  30
Pro Ala Val Pro Lys Val Ala Pro Gly Thr Met Pro Thr Arg Pro Glu
        35                  40                  45
Gly Gly Thr Glu Thr Thr Ser Met Leu Xaa Val Pro Gly Val Thr Gln
    50                  55                  60
Ser Pro Arg Gly Glu Arg Gly Ser Gly Pro His Ala Val Gln Gly Val
65                  70                  75                  80
Ala Leu Pro Xaa Arg Gly Ser Pro Arg Gly Pro Gly Pro Arg Ala Pro
                85                  90                  95
Gly Arg Gly Arg Asp Cys Gly Gly Asn Gly Pro Ala Glu Ala Pro Ala
```

```
          100               105               110
Pro Leu Ser Ser Ala Phe Gln Pro Pro Ala Leu Gly Pro Ala Pro Lys
     115               120               125
Glu Gly Gly Pro Ser Ser Leu Asn Lys Arg Cys Thr
     130               135               140
```

<210> 6005
<211> 1735
<212> DNA
<213> Homo sapiens

<400> 6005

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gagcttggat tgcccggtgc cccaggaatc gatggagaga agggccccaa aggacagaaa
60
ggagacccag gagagcctgg gccagcagga ctcaaagggg aagcaggcga gatgggcttg
120
tccggcctcc cgggcgctga cggcctcaag ggggagaagg gggagtcggc atctcagcct
180
acaggagagc ctggctcagc tcatagtgag ccagggcccc ctggcccccc tggcccccca
240
ggcccgatgg gcctccaggg aatccagggt cccaagggct tggatggagc aaagggagag
300
aagggtgcgt cgggtgagag aggctccagc ggcctgcctg ggccagttgg cccaccgggc
360
cttattgggc tgccaggaac caaaggagag aagggcagac ccggggagcc aggactagat
420
ggtttccctg gaccccgagg agagaaaggt gatcggagcg agcgtggaga aagggagaa
480
cgaggggtcc ccggccggaa aggagtgaag ggccagaagg gcgagccggg accaccaggc
540
ctggaccagc cgtgtcccgt gggccccgac gggctgcctg tgcctggctg ctggcataag
600
tgaccacag gcccagctca cacctgtaca gatccgtgtg gacattttta attttgtaa
660
aaacaaaaca gtaatatatt gatcttttt catggaatgc gctacctgtg gccttttaac
720
attcaagagt atgcccaccc agccccaaag ccaccggcat gtgaagctgc cggaaagtgg
780
acaggccaga ccagggagat gtgtacctga ggggcaccct tgggcctggg ctttcccagg
840
aaggagatga aggtagaagc acctggctcg ggcaaggcta gaaagatgct acgttgggcc
900
ttcagtcacc tgatcagcag agagactctc agctgtggta ctgccctgta agaacctgcc
960
cccgcaaaac tctggagtcc ctgggacaca ccctatccaa gaagacccag gggtggaaca
1020
gcggctgctg ttgctcctgg cctcatcagc ctccaaactc aaccacaacc agctgcctct
1080
gcagttggac aagacttggc ccccggacaa gactcgccca gcacttgcgg ctgggcccgg
1140
ggagcagtga gtggaaatcc cccacgaggg tctagctcta ccacattcag gaggcctcag
1200
gaggccagcc tgccatgaga gcacatgtcc tctggccagg agtagtggct gagctctgtg
1260
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```
atcgctgtga tgtggaccca gctccaggga gcagagtgtc ggggatggag gggcccagcc
1320
tggactgact gctacttcct gtctctgttt ccattatcac ccagagaggg acaagatagg
1380
acatggcctg gaccagggag gcaggcctcc cactcagagt ctgggtctca ctggccccaa
1440
gtctcccacc cagaactctg gccaaaaatg gctctctagg tgggctgtgc aggcaaagca
1500
aagctcaggg ctggttccca gctggcctga gcaggggggcc tgccaccaga cccacccacg
1560
ctctgacgag aggctttttcc acctccagca agtgttccca gcaaccagct ccatcctggc
1620
tgcttgcctt ccatttccgt gtagatggag atcactgtgt gtaataaacc acaagtgcgt
1680
gaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaag
1735


<210> 6006
<211> 200
<212> PRT
<213> Homo sapiens

<400> 6006
Glu Leu Gly Leu Pro Gly Ala Pro Gly Ile Asp Gly Glu Lys Gly Pro
 1               5                  10                  15
Lys Gly Gln Lys Gly Asp Pro Gly Glu Pro Gly Pro Ala Gly Leu Lys
            20                  25                  30
Gly Glu Ala Gly Glu Met Gly Leu Ser Gly Leu Pro Gly Ala Asp Gly
        35                  40                  45
Leu Lys Gly Glu Lys Gly Glu Ser Ala Ser Gln Pro Thr Gly Glu Pro
    50                  55                  60
Gly Ser Ala His Ser Glu Pro Gly Pro Pro Gly Pro Pro Gly Pro Pro
65                  70                  75                  80
Gly Pro Met Gly Leu Gln Gly Ile Gln Gly Pro Lys Gly Leu Asp Gly
                85                  90                  95
Ala Lys Gly Glu Lys Gly Ala Ser Gly Glu Arg Gly Ser Ser Gly Leu
            100                 105                 110
Pro Gly Pro Val Gly Pro Pro Gly Leu Ile Gly Leu Pro Gly Thr Lys
        115                 120                 125
Gly Glu Lys Gly Arg Pro Gly Glu Pro Gly Leu Asp Gly Phe Pro Gly
    130                 135                 140
Pro Arg Gly Glu Lys Gly Asp Arg Ser Glu Arg Gly Glu Lys Gly Glu
145                 150                 155                 160
Arg Gly Val Pro Gly Arg Lys Gly Val Lys Gly Gln Lys Gly Glu Pro
                165                 170                 175
Gly Pro Pro Gly Leu Asp Gln Pro Cys Pro Val Gly Pro Asp Gly Leu
            180                 185                 190
Pro Val Pro Gly Cys Trp His Lys
        195                 200


<210> 6007
<211> 693
<212> DNA
<213> Homo sapiens
```

```
<400> 6007
cagccccta agccatctcc ctccagtgac aacctctatt cagccttcac cagtgatggt
60
gccatttcag taccaagcct ttctgctcca ggtcaaggga agatggtgaa aaaagtctgt
120
ccttgcaacc agctctgtag aaccagcagc acaaacactg ttgggggcaac agtgaacagc
180
caagccgcc aagctcagcc tcctgccatg acgtccagca ggaagggcac attcacagat
240
gacttgcaca agttggtaga caattgggcc cgagatgcca tgaatctctc aggcaggaga
300
ggaagcaaag ggcacatgaa ttatgagggc cctggaatgg caaggaagtt ctctgcaccc
360
gggcaactgt gcatctccat gacctcgaac ctgggtggct ctgcccccat ctctgcagca
420
tcagctacct ctctaggtca cttcaccaag tctatgtgcc cccacagca gtatggcttt
480
ccagctaccc catttggcgc tcaatggagt gggacgggtg gcccagcacc acagccactt
540
ggccagttcc aacctgtggg aactgcctcc ttgcagaatt tcaacatcag caatttgcag
600
aaatccatca gcaaccccc aggctccaac ctgcggacca cttagaccta gagacattaa
660
ctgaatagat ctgggggcag gagatggaat gct
693

<210> 6008
<211> 214
<212> PRT
<213> Homo sapiens

<400> 6008
Gln Pro Leu Lys Pro Ser Pro Ser Ser Asp Asn Leu Tyr Ser Ala Phe
1               5                   10                  15
Thr Ser Asp Gly Ala Ile Ser Val Pro Ser Leu Ser Ala Pro Gly Gln
            20                  25                  30
Gly Lys Met Val Lys Lys Val Cys Pro Cys Asn Gln Leu Cys Arg Thr
        35                  40                  45
Ser Ser Thr Asn Thr Val Gly Ala Thr Val Asn Ser Gln Asn Ala Ala Gln
    50                  55                  60
Ala Gln Pro Pro Ala Met Thr Ser Ser Arg Lys Gly Thr Phe Thr Asp
65                  70                  75                  80
Asp Leu His Lys Leu Val Asp Asn Trp Ala Arg Asp Ala Met Asn Leu
                85                  90                  95
Ser Gly Arg Arg Gly Ser Lys Gly His Met Asn Tyr Glu Gly Pro Gly
            100                 105                 110
Met Ala Arg Lys Phe Ser Ala Pro Gly Gln Leu Cys Ile Ser Met Thr
        115                 120                 125
Ser Asn Leu Gly Gly Ser Ala Pro Ile Ser Ala Ala Ser Ala Thr Ser
    130                 135                 140
Leu Gly His Phe Thr Lys Ser Met Cys Pro Pro Gln Gln Tyr Gly Phe
145                 150                 155                 160
Pro Ala Thr Pro Phe Gly Ala Gln Trp Ser Gly Thr Gly Gly Pro Ala
```

```
                165                170                   175
Pro Gln Pro Leu Gly Gln Phe Gln Pro Val Gly Thr Ala Ser Leu Gln
                180                185                   190
Asn Phe Asn Ile Ser Asn Leu Gln Lys Ser Ile Ser Asn Pro Pro Gly
         195                200                   205
Ser Asn Leu Arg Thr Thr
      210


<210> 6009
<211> 1570
<212> DNA
<213> Homo sapiens

<400> 6009
nnctgcacca tggcggcccg gcttgtcagc cgatgcgggg ctgtgcgtgc agctccccac
60
agcggcccgc tggctgtcct ggcgcaggtg gtccggcgct caacagacac cgtgtatgac
120
gtggtggtgt cgggtggagg cctggtgggc gctgccatgg cctgtgcctt gggatatgat
180
attcactttc atgcaagaa aatcctgttg ctcgaagcag gtccaaagaa agtactggag
240
aaattgtcag aaacttacag caacagggtc agctccattt ccctggctc tgcaacgctt
300
ctcagtagtt ttggtgcctg ggaccatatc tgcaacatga gatacagagc ctttcggcga
360
atgcaggtgt gggacgcctg ctcagaggcc ctgataatgt ttgataagga taatttagat
420
gacatgggct atatcgtgga gaatgatgtc atcatgcatg ctctcactaa gcagttggag
480
gctgtgtctg accgagtgac ggttctctac aggagcaaag ccattcgcta tacctggcct
540
tgtccatttc ctatggccga ctccagccct tgggttcata ttaccctagg tgatggcagc
600
accttccaga ccaaattgtt gataggtgca gatggtcaca actccggagt acggcaggct
660
gttggaatcc agaatgtgag ctggaactat gaccagtctg ctgttgtggc tactctgcat
720
ttatcagagg ccacagaaaa caacgtagcc tggcagagat ttcttccctc tgggcctatt
780
gctctgctcc cgctctcaga caccttgagt tccttggttt ggtccacgtc ccatgaacat
840
gcagcagagc tagttagcat ggatgaggaa aaatttgtgg atgccgttaa ctctgccttt
900
tggagtgatg ctgaccacac ggacttcatc gacacagctg gtgccatgct gcagtatcct
960
gtcagccttc tgaagcccac taaggtctcg gctcgccagc tgcccccaag cgtaccatgg
1020
gtggatgcca aaagccgagt tctgtttcct cttgggttgg acatgtgtgc tgagtacgtc
1080
aggcctcggg tggcgctcat tggggatgca gcccacagag tccatccgct tgcaggacag
1140
ggtgtcaaca tgggctttgg ggatatctcc agcttggccc atcacctcag tacggcagcc
1200
```

```
ttcaatggga aggacttagg ttccgtgagc cacctcacag gttatgaaac agaaagacag
1260
cgtcacaaca ctgctcttct ggctgctaca gacttactaa aaaggctcta ttctaccagt
1320
gcctccccgc ttgtgttgct caggacgtgg ggcttgcagg ccacaaatgc agtgtctcca
1380
ctcaaagaac agattattgg ctttgcaagc aaatgagtac tcctctccta aagaaagatt
1440
acgttgatga aaaagaacat cctgcccagg acccatcata catattttca agatcttatt
1500
taatttaata aacttacttt acattaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1560
aaaaaaaaaa
1570
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```
<210> 6010
<211> 468
<212> PRT
<213> Homo sapiens
```

```
<400> 6010
Met Ala Ala Arg Leu Val Ser Arg Cys Gly Ala Val Arg Ala Ala Pro
1               5                   10                  15
His Ser Gly Pro Leu Ala Val Leu Ala Gln Val Val Arg Arg Ser Thr
            20                  25                  30
Asp Thr Val Tyr Asp Val Val Val Ser Gly Gly Gly Leu Val Gly Ala
        35                  40                  45
Ala Met Ala Cys Ala Leu Gly Tyr Asp Ile His Phe His Asp Lys Lys
    50                  55                  60
Ile Leu Leu Leu Glu Ala Gly Pro Lys Lys Val Leu Glu Lys Leu Ser
65                  70                  75                  80
Glu Thr Tyr Ser Asn Arg Val Ser Ser Ile Ser Pro Gly Ser Ala Thr
                85                  90                  95
Leu Leu Ser Ser Phe Gly Ala Trp Asp His Ile Cys Asn Met Arg Tyr
            100                 105                 110
Arg Ala Phe Arg Arg Met Gln Val Trp Asp Ala Cys Ser Glu Ala Leu
            115                 120                 125
Ile Met Phe Asp Lys Asp Asn Leu Asp Asp Met Gly Tyr Ile Val Glu
    130                 135                 140
Asn Asp Val Ile Met His Ala Leu Thr Lys Gln Leu Glu Lys Ala Val Ser
145                 150                 155                 160
Asp Arg Val Thr Val Leu Tyr Arg Ser Lys Ala Ile Arg Tyr Thr Trp
                165                 170                 175
Pro Cys Pro Phe Pro Met Asn Asp Ser Ser Pro Trp Val His Ile Thr
            180                 185                 190
Leu Gly Asp Gly Ser Thr Phe Gln Thr Lys Leu Leu Ile Gly Ala Asp
            195                 200                 205
Gly His Asn Ser Gly Val Arg Gln Ala Val Gly Ile Gln Asn Val Ser
    210                 215                 220
Trp Asn Tyr Asp Gln Ser Ala Val Val Ala Thr Leu His Leu Ser Glu
225                 230                 235                 240
Ala Thr Glu Asn Asn Val Ala Trp Gln Arg Phe Leu Pro Ser Gly Pro
                245                 250                 255
Ile Ala Leu Leu Pro Leu Ser Asp Thr Leu Ser Ser Leu Val Trp Ser
```

```
              260                  265                  270
Thr Ser His Glu His Ala Ala Glu Leu Val Ser Met Asp Glu Glu Lys
     275                  280                  285
Phe Val Asp Ala Val Asn Ser Ala Phe Trp Ser Asp Ala Asp His Thr
     290                  295                  300
Asp Phe Ile Asp Thr Ala Gly Ala Met Leu Gln Tyr Pro Val Ser Leu
305                  310                  315                  320
Leu Lys Pro Thr Lys Val Ser Ala Arg Gln Leu Pro Pro Ser Val Pro
                325                  330                  335
Trp Val Asp Ala Lys Ser Arg Val Leu Phe Pro Leu Gly Leu Gly His
               340                  345                  350
Ala Ala Glu Tyr Val Arg Pro Arg Val Ala Leu Ile Gly Asp Ala Ala
          355                  360                  365
His Arg Val His Pro Leu Ala Gly Gln Gly Val Asn Met Gly Phe Gly
     370                  375                  380
Asp Ile Ser Ser Leu Ala His His Leu Ser Thr Ala Ala Phe Asn Gly
385                  390                  395                  400
Lys Asp Leu Gly Ser Val Ser His Leu Thr Gly Tyr Glu Thr Glu Arg
                405                  410                  415
Gln Arg His Asn Thr Ala Leu Leu Ala Ala Thr Asp Leu Leu Lys Arg
          420                  425                  430
Leu Tyr Ser Thr Ser Ala Ser Pro Leu Val Leu Leu Arg Thr Trp Gly
          435                  440                  445
Leu Gln Leu Ala Thr Asn Ala Val Ser Pro Leu Lys Glu Gln Ile Met Ala
     450                  455                  460
Phe Ala Ser Lys
465


<210> 6011
<211> 1331
<212> DNA
<213> Homo sapiens

<400> 6011
ngcaggcccg cctaagccaa gggcaaccta ggcatgcagc ttggttttgc tgacttcatg
60
ggtgtgttca gcaaaggggt tcgggaagtg gagcgggttc tacagctgcc caaggaaccg
120
ggtgattctg cacagttcac caaagccatt gccatcatct tcccctttct gtatctgctg
180
gagaaggtgg agtgcacccc cagccaggag cacctgaagc accagaccgt ctaccgcctg
240
ctcaagtgcg cgcccagggg caagaacggc ttcaccccct gcacatggc tgtggacaag
300
gacaccacaa acgtgggccg ctatcccgtg ggcagattcc cctccctgca cgtggtcaaa
360
gtgctgctcg actgcggggc cgacccggac agcagggatt ttgacaacaa caccccgcta
420
cacatagcag cccgaacaa ctgcccggcc atcatgaatg ccctgatcga agcaggggcc
480
cacatggacg ccaccaatgc cttcaagaag acggcctacg agctgctgga cgagaagctg
540
ctggccaggg gtaccatgca gcccttcaac tacgtgaccc tgcagtgcct tgcggcccgg
600
```

```
gccctggata agaacaagat cccttacaag ggcttcatcc cggaagatct agaggcattc
660
atcgaactgc actgacctgc ccagaacatc tgcaccctca cctctcccct ctcctgctga
720
gatggggaa atccggctgg ggtatagcag atgctcgttc ttgcctcctt caggcaccaa
780
tcaggagaag ggttctgcct cccatcccct ctacctgcag acagggtcgg aggtgttagc
840
gagccttttgg tgctagaagc ctgcggggtc atgtgctaag aggacagtct ttctccggga
900
gcccgctcac tcattctgag ttaggaaaag acacaagacc ttccccacat cctgtctgcc
960
tgggttaggg aggcctttgc cttgttacct agaggcggag ggactgaagc cattgcgttc
1020
cttccctgct agaaacacag gaagaagttg aggacggtct gccttccctc gtccctttac
1080
ctggccagat aactccagcc gctgaataca gtgttaggac tgggggctcc tgagatgaga
1140
gtttgagatt caggggaatga gaccacctct catttcttcc agcatgatcg cgcctgttcc
1200
cgtgccaccg gagtccctgg caggcaggca gggctctgcc cagggcagcc tgccacttgc
1260
atagctttcg gttggtttgg tgttctgttt atttaataag tgggcaggtt gcaagcgttg
1320
cacagaaatt t
1331

<210> 6012
<211> 219
<212> PRT
<213> Homo sapiens

<400> 6012
Ala Lys Gly Asn Leu Gly Met Gln Leu Gly Phe Ala Asp Phe Met Gly
1               5                   10                  15
Val Phe Ser Lys Gly Val Arg Glu Val Glu Arg Val Leu Gln Leu Pro
                20                  25                  30
Lys Glu Pro Gly Asp Ser Ala Gln Phe Thr Lys Ala Ile Ala Ile Ile
            35                  40                  45
Phe Pro Phe Leu Tyr Leu Leu Glu Lys Val Glu Cys Thr Pro Ser Gln
        50                  55                  60
Glu His Leu Lys His Gln Thr Val Tyr Arg Leu Leu Lys Cys Ala Pro
65                  70                  75                  80
Arg Gly Lys Asn Gly Phe Thr Pro Leu His Met Ala Val Asp Lys Asp
                85                  90                  95
Thr Thr Asn Val Gly Arg Tyr Pro Val Gly Arg Phe Pro Ser Leu His
                100                 105                 110
Val Val Lys Val Leu Leu Asp Cys Gly Ala Asp Pro Asp Ser Arg Asp
            115                 120                 125
Phe Asp Asn Asn Thr Pro Leu His Ile Ala Ala Gln Asn Asn Cys Pro
        130                 135                 140
Ala Ile Met Asn Ala Leu Ile Glu Ala Gly Ala His Met Asp Ala Thr
145                 150                 155                 160
Asn Ala Phe Lys Lys Thr Ala Tyr Glu Leu Leu Asp Glu Lys Leu Leu
```

```
                    165                     170                    175
Ala Arg Gly Thr Met Gln Pro Phe Asn Tyr Val Thr Leu Gln Cys Leu
                180                     185                    190
Ala Ala Arg Ala Leu Asp Lys Asn Lys Ile Pro Tyr Lys Gly Phe Ile
          195                     200                    205
Pro Glu Asp Leu Glu Ala Phe Ile Glu Leu His
      210                     215
```

<210> 6013
<211> 2204
<212> DNA
<213> Homo sapiens

<400> 6013

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acgcgtgaag ggggcggagg tggtggtgga ggtggcagtg tggctcctaa gccaccacgg
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ggccggaaga agaagcggat gctggaatca gggctgcccg agatgaatga cccttatgtc
120
ctctccctg aggatgatga tgaccatcag aaagacggcg agacctacag gtgccggatg
180
tgctcactga cattctactc caagtcggag atgcagatcc actccaagat gcacacggag
240
accatcaagc cccacaagtg cccacactgc tccaagacct tcgccaacag ctcctacctg
300
gcccagcaca tccgtatcca ctcaggggcc aagccctaca actgtaactt ttgtgagaaa
360
tccttccgtc agctctcaca cctccacag cacacacgaa tccacactgg tgatagacca
420
tacaaatgtg cacacccagg ctgtgagaaa gccttcacac aactctccaa tctgcagtcc
480
cacagacggc aacacaacaa agataaaccc ttcaagtgcc acaactgtca tcgggcgtac
540
acggatgcag cctcactaga ggtgcacctg tctacgcaca cagtgaagca tgccaaggtg
600
tacacctgca ctatctgcag tcgggcatac acatcagaaa cataccttat gaaacatatg
660
cgcaaacaca acccgcctga tcttcagcaa caggtgcagg cagcagcagc agcggcagca
720
gtggcccagg cccaggctca agctcaagcc caggctcagg ctcaggctca agcccaggcc
780
caggcccagg cctcccaggc atcacagcag cagcagcagc agcagcagca gcagcagcag
840
cagcaacagc caccaccaca cttccagtct cctggggcag ccccccaggg tgggggtggt
900
ggggacagca atcccaaccc tccaccccag tgttcctttg acctgacccc gtataagacg
960
gcggagcatc ataaggacat ctgcctcact gtcaccacca gcaccatcca ggtggagcac
1020
ctggccagct cttagagatc cgtgctgcca cccactggga agaggaagaa gtagtcctgg
1080
tgtcttcttt ctccaactct tggtgggaaa agtcctttc ttccttgaca ggccttggct
1140
ccatctcctt gggcctctgt cacggctttc cttcacagga taccatcctt tttctgaact
1200
```

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cttcttcaaa aggaacatca gccctcctga ttgcaaagga atactgagct gatggtgtca
1260
tccagcagcc tcccctccca agcaaagctt ctaaaactgg gggtcggtgc tcaagggaag
1320
gatttgctat gacctcatag aaccttgtcc agtgtggcca cttaccctat ccttaccctc
1380
cttatcctca aagtttgggc tgatgtaaga ctagaggctg gccctcccag ataacagaga
1440
aaaggggagcc ccaaatgcaa ccagcctctt gttctattct tgcctgcaaa agaacagagg
1500
tttctcaaat gcctcagtcc ctgagagcca tttcttcccc tacatcgtct cactttgctt
1560
cctattgact gctggtagaa ggagatttgg ggtaggggct agacctcctt ttatttgaag
1620
ggggcaaggg ctgagatgtg gtccccaagg ggccagaaat tcccaagttg gtcacaggtg
1680
gcttagaagt gtgtgttatg gttttacgga tttccttgaa gcctctctcc ttctctgcct
1740
acaaagaccc tatactctca gtctccccaa cccacccca aggagctgtg ggaggctttg
1800
tgttatctgt gaaactccaa aacagggtg ttgcggagaa gggagagttc aaggcaaacg
1860
caaggactgg acttagctcc ctaggtgcca cagtcagatg ccggacacgg atttatatat
1920
aaatatatat atataaatat attataccca ctcatcacgg ccatctttgt tgtaaccatt
1980
tctgtgttta taaatgcatt atctctgaga attttcatat ttgatgtttt gtttatttt
2040
gtcctttttt tccctctctc caccctgtc ctctagccac agcattttc tttttgtctt
2100
ttttttttt ttttaaatca tggcagattt cagaggaaag gaaattaaaa aaaaaatcag
2160
gaaaccagtt gttataaagt aatttaaaaa tgaagaaaaa aaaa
2204


<210> 6014
<211> 182
<212> PRT
<213> Homo sapiens

<400> 6014
Arg Gln His Asn Lys Asp Lys Pro Phe Lys Cys His Asn Cys His Arg
 1               5                  10                  15
Ala Tyr Thr Asp Ala Ala Ser Leu Glu Val His Leu Ser Thr His Thr
                20                  25                  30
Val Lys His Ala Lys Val Tyr Thr Cys Thr Ile Cys Ser Arg Ala Tyr
        35                  40                  45
Thr Ser Glu Thr Tyr Leu Met Lys His Met Arg Lys His Asn Pro Pro
    50                  55                  60
Asp Leu Gln Gln Gln Val Gln Ala Ala Ala Ala Ala Ala Ala Val Ala
65                  70                  75                  80
Gln Ala Gln Ala Gln Ala Gln Ala Gln Ala Gln Ala Gln Ala Gln Ala
                85                  90                  95
Gln Ala Gln Ala Gln Ala Ser Gln Ala Ser Gln Gln Gln Gln Gln Gln
```

```
              100                 105                 110
Gln Gln Gln Gln Gln Gln Gln Gln Gln Pro Pro Pro His Phe Gln Ser
         115                 120                 125
Pro Gly Ala Ala Pro Gln Gly Gly Gly Gly Gly Asp Ser Asn Pro Asn
         130                 135                 140
Pro Pro Pro Gln Cys Ser Phe Asp Leu Thr Pro Tyr Lys Thr Ala Glu
145                 150                 155                 160
His His Lys Asp Ile Cys Leu Thr Val Thr Thr Ser Thr Ile Gln Val
                 165                 170                 175
Glu His Leu Ala Ser Ser
             180
```

```
<210> 6015
<211> 612
<212> DNA
<213> Homo sapiens

<400> 6015
gccgagtgag aacaagagta cagggacttt acaattttta ttgatttta ctatatatac
60
tgcagtaatg attgaaatga atgactttt tttaggaaaa tgttgtaaaa ggcaggcttc
120
tgagaatcct gattgaatgg aagtgaagag ccatgagaag ctcgcccagg agagtctaat
180
ttattctgat tacagctcat ggagagtgta gggcatgtga ggccactcca gctattgtta
240
ttcaacttgc atctgcccct gctgatcccc tgagaggctg gcagcctctc agggctcctt
300
gggcggtgag ccctcctccg cagcctgcaa gccttttac ctctcttccat cacctgagcc
360
tgaaagtgtg cctgcccgac cttgctcctg gccttatttc tcttcctatc ttatctccat
420
tccgcaggtg cctcagccat tgcctaccct tttgcacaaa attaaaaaga aaagaaaaaa
480
gccagtgaga aacagtcac acgataaagg cacagcacag cagttggttg tctctttta
540
aacaggaagt agcagtcatt ctatatggat gttcagctag acccacgggg cttaaccttt
600
acctggcatg gc
612
```

```
<210> 6016
<211> 99
<212> PRT
<213> Homo sapiens

<400> 6016
Met Glu Arg Gly Lys Lys Ala Cys Arg Leu Arg Arg Arg Ala His Arg
1               5                   10                  15
Pro Arg Ser Pro Glu Arg Leu Pro Ala Ser Gln Gly Ile Ser Arg Gly
             20                  25                  30
Arg Cys Lys Leu Asn Asn Asn Ser Trp Ser Gly Leu Thr Cys Pro Thr
         35                  40                  45
Leu Ser Met Ser Cys Asn Gln Asn Lys Leu Asp Ser Pro Gly Arg Ala
```

```
    50                      55                      60
Ser His Gly Ser Ser Leu Pro Phe Asn Gln Asp Ser Gln Lys Pro Ala
65                      70                      75                      80
Phe Tyr Asn Ile Phe Leu Lys Lys Ser His Ser Phe Gln Ser Leu Leu
                85                      90                      95
Gln Tyr Ile
```

<210> 6017
<211> 2091
<212> DNA
<213> Homo sapiens

<400> 6017

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ccggccaagt ttaactttgc tagtgatgtg ttggatcact gggctgacat ggagaaggct
60
ggcaagcgac tcccaagccc agccctgtgg tgggtgaatg ggaaggggaa ggaattaatg
120
tggaatttca gagaactgag tgaaaacagc cagcaggcag ccaacgtcct ctcgggagcc
180
tgtggcctgc agcgtgggga tcgtgtggca gtgatgctgc cccgagtgcc tgagtggtgg
240
ctggtgatcc tgggctgcat tcgagcaggt ctcatcttta tgcctggaac catccagatg
300
aaatccactg acatactgta taggttgcag atgtctaagg ccaaggctat tgttgctggg
360
gatgaagtca tccaagaagt ggacacagtg gcatctgaat gtccttctct gagaattaag
420
ctactggtgt ctgagaaaag ctgcgatggg tggctgaact tcaagaaact actaaatgag
480
gcatccacca ctcatcactg tgtggagact ggaagccagg aagcatctgc catctacttc
540
actagtggga ccagtggtct tcccaagatg gcagaacatt cctactcgag cctgggcctc
600
aaggccaaga tggatgctgg ttggacaggc ctgcaagcct ctgatataat gtggaccata
660
tcagacacag gttggatact gaacatcttg ggctcacttt tggaatcttg acattaggga
720
gcatgcacat ttgttcatct cttgccaaag tttgacccac tggttattct aaagacactc
780
tccagttatc caatcaagag tatgatgggt gcccctattg tttaccggat gttgctacag
840
caggatcttt ccagttacaa gttcccccat ctacagaact gcctcgctg aggggagtcc
900
cttcttccag aaactctgga gaactggagg gcccagacag gactggacat ccgagaattc
960
tatggccaga cagaaacggg attaacttgc atggtttcca agacaatgaa aatcaaacca
1020
ggatacatgg gaacggctgc ttcctgttat gatgtacagg ttatagatga taagggcaac
1080
gtcctgcccc ccggcacaga aggagacatt ggcatcaggg tcaaacccat caggcctata
1140
ggcatcttct ctggctatgt ggaaaatccc gacaagacag cagccaacat tcgaggagac
1200
```

```
ttttggctcc ttggagaccg gggaatcaaa gatgaagatg ggtatttcca gtttatggga
1260
cgggcagatg atatcattaa ctccagcggg taccggattg gaccctcgga ggtagagaat
1320
gcactgatga agcaccctgc tgtggttgag acggctgtga tcagcagccc agaccccgtc
1380
cgaggagagg tggtgaaggc atttgtggtc ctggcctcgc agttcctgtc ccatgaccca
1440
gaacagctca ccaaggagct gcagcagcat gtgaagtcag tgacagcccc atacaagtac
1500
ccaagaaaga tagagtttgt cttgaacctg cccaagactg tcacagggaa aattcaacga
1560
gccaagcttc gagacaagga gtggaagatg tccggaaaag cccgtgcgca gtgagacatc
1620
taagagacat tcatttggat tccctcttc tttctcttc ttttcccttt gggcccttgg
1680
ccttactatg atgatatgag attctttatg aaagaacatg aatgtaagtt ttgtcttgcc
1740
ctggttatta gccttggtta ttagcacaaa actttaccat gttagatgtt gaaagaagaa
1800
agggaaggaa tgagagagag tgaaaaggag agggtaacag aaaaaaaagga aagaaaagta
1860
agtcagggaa atattaaaac tgcaaggaa agcaattgaa aaagaaataa agtagggaaa
1920
gaaggagaga ggaagcaagg gaaggaggaa gaaaggaaag aggagatgaa aggggagaa
1980
aagatagaag aaaaataatt gaagggagaa tcagaaaaat aaagagaaga aaggaaagaa
2040
ataaagagag aaagagaaag aagaaagagc aaaagaacac aagaaagaaa g
2091


<210> 6018
<211> 537
<212> PRT
<213> Homo sapiens

<400> 6018
Pro Ala Lys Phe Asn Phe Ala Ser Asp Val Leu Asp His Trp Ala Asp
 1               5                  10                  15
Met Glu Lys Ala Gly Lys Arg Leu Pro Ser Pro Ala Leu Leu Trp Trp Val
            20                  25                  30
Asn Gly Lys Gly Lys Glu Leu Met Trp Asn Phe Arg Glu Leu Ser Glu
        35                  40                  45
Asn Ser Gln Gln Ala Ala Asn Val Leu Ser Gly Ala Cys Gly Leu Gln
    50                  55                  60
Arg Gly Asp Arg Val Ala Val Met Leu Pro Arg Val Pro Glu Trp Trp
65                  70                  75                  80
Leu Val Ile Leu Gly Cys Ile Arg Ala Gly Leu Ile Phe Met Pro Gly
                85                  90                  95
Thr Ile Gln Met Lys Ser Thr Asp Ile Leu Tyr Arg Leu Gln Met Ser
            100                 105                 110
Lys Ala Leu Ala Ile Val Ala Gly Asp Glu Val Ile Gln Glu Val Asp
        115                 120                 125
Thr Val Ala Ser Glu Cys Pro Ser Leu Arg Ile Lys Leu Leu Val Ser
```

```
         130                    135                    140
Glu Lys Ser Cys Asp Gly Trp Leu Asn Phe Lys Lys Leu Leu Asn Glu
145                    150                    155                    160
Ala Ser Thr Thr His His Cys Val Glu Thr Gly Ser Gln Glu Ala Ser
                       165                    170                    175
Ala Ile Tyr Phe Thr Ser Gly Thr Ser Gly Leu Pro Lys Met Ala Glu
                  180                    185                    190
His Ser Tyr Ser Ser Leu Gly Leu Lys Ala Lys Met Asp Ala Gly Trp
             195                    200                    205
Thr Gly Leu Gln Ala Ser Asp Ile Met Trp Thr Ile Ser Asp Thr Gly
        210                    215                    220
Trp Ile Leu Asn Ile Leu Gly Ser Leu Leu Glu Ser Trp Thr Leu Gly
225                    230                    235                    240
Ala Cys Thr Phe Val His Leu Leu Pro Lys Phe Asp Pro Leu Val Ile
                  245                    250                    255
Leu Lys Thr Leu Ser Ser Tyr Pro Ile Lys Ser Met Met Gly Ala Pro
             260                    265                    270
Ile Val Tyr Arg Met Leu Leu Gln Gln Asp Leu Ser Ser Tyr Lys Phe
        275                    280                    285
Pro His Leu Gln Asn Cys Leu Ala Gly Gly Glu Ser Leu Leu Pro Glu
        290                    295                    300
Thr Leu Glu Asn Trp Arg Ala Gln Thr Gly Leu Asp Ile Arg Glu Phe
305                    310                    315                    320
Tyr Gly Gln Thr Glu Thr Gly Leu Thr Cys Met Val Ser Lys Thr Met
                  325                    330                    335
Lys Ile Lys Pro Gly Tyr Met Gly Thr Ala Ala Ser Cys Tyr Asp Val
             340                    345                    350
Gln Val Ile Asp Asp Lys Gly Asn Val Leu Pro Pro Gly Thr Glu Gly
        355                    360                    365
Asp Ile Gly Ile Arg Val Lys Pro Ile Arg Pro Ile Gly Ile Phe Ser
        370                    375                    380
Gly Tyr Val Glu Asn Pro Asp Lys Thr Ala Ala Asn Ile Arg Gly Asp
385                    390                    395                    400
Phe Trp Leu Leu Gly Asp Arg Gly Ile Lys Asp Glu Asp Gly Tyr Phe
                  405                    410                    415
Gln Phe Met Gly Arg Ala Asp Asp Ile Ile Asn Ser Ser Gly Tyr Arg
             420                    425                    430
Ile Gly Pro Ser Glu Val Glu Asn Ala Leu Met Lys His Pro Ala Val
        435                    440                    445
Val Glu Thr Ala Val Ile Ser Ser Pro Asp Pro Val Arg Gly Glu Val
        450                    455                    460
Val Lys Ala Phe Val Val Leu Ala Ser Gln Phe Leu Ser His Asp Pro
465                    470                    475                    480
Glu Gln Leu Thr Lys Glu Leu Gln Gln His Val Lys Ser Val Thr Ala
                  485                    490                    495
Pro Tyr Lys Tyr Pro Arg Lys Ile Glu Phe Val Leu Asn Leu Pro Lys
             500                    505                    510
Thr Val Thr Gly Lys Ile Gln Arg Ala Lys Leu Arg Asp Lys Glu Trp
        515                    520                    525
Lys Met Ser Gly Lys Ala Arg Ala Gln
        530                    535
```

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<210> 6019
<211> 3002
```

```
<212> DNA
<213> Homo sapiens

<400> 6019
attcccctcc ttcatggctg catatctggc tagcgtgaag agatagtcac tgagtctgtt
60
taagaacttg gccacgttcg catcggtctc tcccatctgg acaagaggca ccacacgtct
120
ctcggcccgg cggcacacgg cccggcagaa atgcagcgcc gagctgatct tgcctcccga
180
cgggcacgct gctccagagt gggcagggct gggagggacc ggtgaggacc tggagggact
240
tggggaactg gaggacagcg tctgtcaagg caggatgaag gccgtgagtg gtgggagctg
300
gctggtgtac ttgtcgatcc actgctccag ctccaggatg ggccccgcct tgaacgtggt
360
atacttaag tgagcctccc gggccgagga gcatggtgtc gccagggccg agccgacgtc
420
ctgcaatgtg cactggattt tctgaagctc ttcggcaaat gtatggccct tttctgtgac
480
taattccaga gcaaacccaa tagctgaact taattcatct gtagttccca cagccttcct
540
cgaagacacc caggatcccc aagatttaca ccaaaacggg agacaaaggg ttttctagta
600
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gt
3002


<210> 6020
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<211> 387
<212> PRT
<213> Homo sapiens

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            20                  25                  30
Thr Gly Arg Asp Leu Ile Ala Tyr Glu Val Lys Ala Asn Gln Arg Asn
        35                  40                  45
Ile Glu Asp Ile Cys Ile Cys Cys Gly Ser Leu Gln Val His Thr Gln
    50                  55                  60
His Pro Leu Phe Glu Gly Gly Ile Cys Ala Pro Cys Lys Asp Lys Phe
65                  70                  75                  80
Leu Asp Ala Leu Phe Leu Tyr Asp Asp Asp Gly Tyr Gln Ser Tyr Cys
                85                  90                  95
Ser Ile Cys Cys Ser Gly Glu Thr Leu Leu Ile Cys Gly Asn Pro Asp
                100                 105                 110
Cys Thr Arg Cys Tyr Cys Phe Glu Cys Val Asp Ser Leu Val Gly Pro
        115                 120                 125
Gly Thr Ser Gly Lys Val His Ala Met Ser Asn Trp Val Cys Tyr Leu
        130                 135                 140
Cys Leu Pro Ser Ser Arg Ser Gly Leu Leu Gln Arg Arg Arg Lys Trp
145                 150                 155                 160
Arg Ser Gln Leu Lys Ala Phe Tyr Asp Arg Glu Ser Glu Asn Pro Leu
                165                 170                 175
Glu Met Phe Glu Thr Val Pro Val Trp Arg Arg Gln Pro Val Arg Val
                180                 185                 190
Leu Ser Leu Phe Glu Asp Ile Lys Lys Glu Leu Thr Ser Leu Gly Phe
        195                 200                 205
Leu Glu Ser Gly Ser Asp Pro Gly Gln Leu Lys His Val Val Asp Val
        210                 215                 220
Thr Asp Thr Val Arg Lys Asp Val Glu Glu Trp Gly Pro Phe Asp Leu
225                 230                 235                 240
Val Tyr Gly Ala Thr Ala Pro Leu Gly His Thr Cys Asp Arg Pro Pro
                245                 250                 255
Ser Trp Tyr Leu Phe Gln Phe His Arg Phe Leu Gln Tyr Ala Arg Pro
            260                 265                 270
Lys Pro Gly Ser Pro Arg Pro Phe Phe Trp Met Phe Val Asp Asn Leu
        275                 280                 285
Val Leu Asn Lys Glu Asp Leu Asp Val Ala Ser Arg Phe Leu Glu Met
        290                 295                 300
Glu Pro Val Thr Ile Pro Asp Val His Gly Gly Ser Leu Gln Asn Ala
305                 310                 315                 320
Val Arg Val Trp Ser Asn Ile Pro Ala Ile Arg Ser Ser Arg His Trp
                325                 330                 335
Ala Leu Val Ser Glu Glu Glu Leu Ser Leu Leu Ala Gln Asn Lys Gln
            340                 345                 350
Ser Ser Lys Leu Ala Ala Lys Trp Pro Thr Lys Leu Val Lys Asn Cys
        355                 360                 365
Phe Leu Pro Leu Arg Glu Tyr Phe Lys Tyr Phe Ser Thr Glu Leu Thr
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Ser Ser Leu
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385

<210> 6021
<211> 3145
<212> DNA
<213> Homo sapiens

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120
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240
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420
cagctgtttg acaaagctgg caaaggagaa gtaacttttg aggatgttaa gcaagttttt
480
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1380

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2880
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3000
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3060
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<210> 6022
<211> 708
<212> PRT
<213> Homo sapiens

<400> 6022
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Cys Pro Phe Thr Trp His Ala Thr His Gly Lys Val Lys Gly Glu Gly
            20                  25                  30
Asp Phe Leu Leu His Val Ala Leu Thr Lys Arg Ala Asp Pro Ala Glu
        35                  40                  45
Leu Arg Thr Ile Phe Leu Lys Tyr Ala Ser Ile Glu Lys Asn Gly Glu
    50                  55                  60
Phe Phe Met Ser Pro Asn Asp Phe Val Thr Arg Tyr Leu Asn Ile Phe
65                  70                  75                  80
Gly Glu Ser Gln Pro Asn Pro Lys Thr Val Glu Leu Leu Ser Gly Val
                85                  90                  95
Val Asp Gln Thr Lys Asp Gly Leu Ile Ser Phe Gln Glu Phe Val Ala
            100                 105                 110
Phe Glu Ser Val Leu Cys Ala Pro Asp Ala Leu Phe Met Val Ala Phe
        115                 120                 125
Gln Leu Phe Asp Lys Ala Gly Lys Gly Glu Val Thr Phe Glu Asp Val
    130                 135                 140
Lys Gln Val Phe Gly Gln Thr Thr Ile His Gln His Ile Pro Phe Asn
145                 150                 155                 160
Trp Asp Ser Glu Phe Val Gln Leu His Phe Gly Lys Glu Arg Lys Arg
                165                 170                 175
His Leu Thr Tyr Ala Glu Phe Thr Gln Phe Leu Leu Glu Ile Gln Leu
            180                 185                 190
Glu His Ala Lys Gln Ala Phe Val Gln Arg Asp Asn Ala Arg Thr Gly
        195                 200                 205
Arg Val Thr Ala Ile Asp Arg Phe Arg Asp Ile Met Val Thr Ile Arg Pro
    210                 215                 220
His Val Leu Thr Pro Asp Phe Val Glu Glu Cys Leu Val Ala Ala Ala Gly
225                 230                 235                 240
Gly Thr Thr Ser His Gln Val Ser Phe Ser Tyr Phe Asn Gly Phe Asn
                245                 250                 255
Ser Leu Leu Asn Asn Met Glu Leu Ile Arg Lys Ile Tyr Ser Thr Leu
            260                 265                 270
Ala Gly Thr Arg Lys Asp Val Glu Val Thr Lys Glu Glu Phe Val Leu
        275                 280                 285
Ala Ala Gln Lys Phe Gly Gln Val Thr Pro Met Glu Val Asp Ile Leu
    290                 295                 300
Phe Gln Leu Ala Asp Leu Tyr Glu Pro Arg Gly Arg Met Thr Leu Ala
305                 310                 315                 320
Asp Ile Glu Arg Ile Ala Pro Leu Glu Glu Gly Thr Leu Pro Phe Asn
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                    325                    330                    335
Leu Ala Glu Ala Gln Arg Gln Gln Lys Ala Ser Gly Asp Ser Ala Arg
            340                    345                    350
Pro Val Leu Leu Gln Val Ala Glu Ser Ala Tyr Arg Phe Gly Leu Gly
            355                    360                    365
Ser Val Ala Gly Ala Val Gly Ala Thr Ala Val Tyr Pro Ile Asp Leu
        370                    375                    380
Val Lys Thr Arg Met Gln Asn Gln Arg Ser Thr Gly Ser Phe Val Gly
385                    390                    395                    400
Glu Leu Met Tyr Lys Asn Ser Phe Asp Cys Phe Lys Lys Val Leu Arg
                    405                    410                    415
Tyr Glu Gly Phe Phe Gly Leu Tyr Arg Gly Leu Leu Pro Gln Leu Leu
            420                    425                    430
Gly Val Ala Pro Glu Lys Ala Ile Lys Leu Thr Val Asn Asp Phe Val
        435                    440                    445
Arg Asp Lys Phe Met His Lys Asp Gly Ser Val Pro Leu Ala Ala Glu
450                    455                    460
Ile Leu Ala Gly Gly Cys Ala Gly Gly Ser Gln Val Ile Phe Thr Asn
465                    470                    475                    480
Pro Leu Glu Ile Val Lys Ile Arg Leu Gln Val Ala Gly Glu Ile Thr
                    485                    490                    495
Thr Gly Pro Arg Val Ser Ala Leu Ser Val Val Arg Asp Leu Gly Phe
            500                    505                    510
Phe Gly Ile Tyr Lys Gly Ala Lys Ala Cys Phe Leu Arg Asp Ile Pro
        515                    520                    525
Phe Ser Ala Ile Tyr Phe Pro Cys Tyr Ala His Val Lys Ala Ser Phe
        530                    535                    540
Ala Asn Glu Asp Gly Gln Val Ser Pro Gly Ser Leu Leu Leu Ala Gly
545                    550                    555                    560
Ala Ile Ala Gly Met Pro Ala Ala Ser Leu Val Thr Pro Ala Asp Val
                565                    570                    575
Ile Lys Thr Arg Leu Gln Val Ala Ala Arg Ala Gly Gln Thr Thr Tyr
            580                    585                    590
Ser Gly Val Ile Asp Cys Phe Arg Lys Ile Leu Arg Glu Glu Gly Pro
        595                    600                    605
Lys Ala Leu Trp Lys Gly Ala Gly Ala Arg Val Phe Arg Ser Ser Pro
    610                    615                    620
Gln Phe Gly Val Thr Leu Leu Thr Tyr Glu Leu Leu Gln Arg Trp Phe
625                    630                    635                    640
Tyr Ile Asp Phe Gly Gly Val Lys Pro Met Gly Ser Glu Pro Val Pro
                    645                    650                    655
Lys Ser Arg Ile Asn Leu Pro Ala Pro Asn Pro Asp His Val Gly Gly
        660                    665                    670
Tyr Lys Leu Ala Val Ala Thr Phe Ala Gly Ile Glu Asn Lys Phe Gly
    675                    680                    685
Leu Tyr Leu Pro Leu Phe Lys Pro Ser Val Ser Thr Ser Lys Ala Ile
690                    695                    700
Gly Gly Gly Pro
705
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<210> 6023
<211> 1014
<212> DNA
<213> Homo sapiens
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<400> 6023
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120
gatcaacaag accatgtaca aaaggggggat aatataccta cgtgaggagc caagtttcca
180
tgttgatggt aaatggaaaa acttttgagt cagagctgag ctctcggaca aaaagggaaa
240
agaagaggga tgaagggaag gggcccaatt cctcttgact gattctaaag ctcataggggg
300
gattccaact cacagctagc cctctgtact aaggaaccag acgaatcttg acctcccagg
360
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480
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600
tgcgcagtga ccgttcacgg aaagagtcag gcctgggagg ggcggaccg gggcacaaat
660
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780
tggaattctt ctaggcgagg acgggcagca gcggccctgg gaaggcttcc gtggaaactt
840
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900
aagtaagttc ttcttcattc tttcagcagt cctgatcttc ttggggagca cccctaaatc
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1014

<210> 6024
<211> 100
<212> PRT
<213> Homo sapiens

<400> 6024
Met Lys Arg Arg Glu Ala Val Cys Ala His Arg His Phe Leu Gly Thr
1   5   10   15
Gly Lys Pro Pro His Pro Leu Gly Arg Ser Ile Pro Val Glu Pro Cys
            20   25   30
Pro Gly Leu Pro Ala Phe Ala Glu Val Asp Leu Leu Ser Leu Leu Val
        35   40   45
Pro Ile Lys Ile Ser Ser Thr Pro Pro Ser Gly Ser Arg Leu Asp Pro
    50   55   60
Gln Ile Ala Ser Ser Ala Phe Pro Gly Leu Gly Ser Leu Gly Gly Gln
65   70   75   80
Asp Ser Ser Gly Ser Leu Val Gln Arg Ala Ser Cys Glu Leu Glu Ser

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                    85                    90                    95
Pro Tyr Glu Leu
              100


<210> 6025
<211> 5905
<212> DNA
<213> Homo sapiens

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120
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180
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720
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1260
gacaacaagc tgctggtctg gaatcactcg agcctgagcc ccgtgcagca gtacacggag
1320
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4560
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4680
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4740
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5760
cggccaggca ctgcctcctg cgatcgaagg ggcaggggga gacagaagcc cctcaagggg
5820
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5880
cgaccccacc tggcagtgcc ctgcc
5905
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```
<210> 6026
<211> 496
<212> PRT
<213> Homo sapiens

<400> 6026
Met Asp Gln Asp Tyr Glu Arg Arg Leu Leu Arg Gln Ile Val Ile Gln
```

```
1                5                  10                 15
Asn Glu Asn Thr Met Pro Arg Val Thr Glu Met Arg Arg Thr Leu Thr
          20                  25                  30
Pro Ala Ser Ser Pro Val Ser Ser Pro Ser Lys His Gly Asp Arg Phe
          35                  40                  45
Ile Pro Ser Arg Ala Gly Ala Asn Trp Ser Val Asn Phe His Arg Ile
          50                  55                  60
Asn Glu Asn Glu Lys Ser Pro Ser Gln Asn Arg Lys Ala Lys Asp Ala
65                  70                  75                  80
Thr Ser Asp Asn Gly Lys Asp Gly Leu Ala Tyr Ser Ala Leu Leu Lys
                85                  90                  95
Asn Glu Leu Leu Gly Ala Gly Ile Glu Lys Val Gln Asp Pro Gln Thr
          100                 105                 110
Glu Asp Arg Arg Leu Gln Pro Ser Thr Pro Glu Lys Lys Gly Leu Phe
          115                 120                 125
Thr Tyr Ser Leu Ser Thr Lys Arg Ser Ser Pro Asp Asp Gly Asn Asp
          130                 135                 140
Val Ser Pro Tyr Ser Leu Ser Pro Val Ser Asn Lys Ser Gln Lys Leu
145                 150                 155                 160
Leu Arg Ser Pro Arg Lys Pro Thr Arg Lys Ile Ser Lys Ile Pro Phe
                165                 170                 175
Lys Val Leu Asp Ala Pro Glu Leu Gln Asp Asp Phe Tyr Leu Asn Leu
          180                 185                 190
Val Asp Trp Ser Ser Leu Asn Val Leu Ser Val Gly Leu Gly Thr Cys
          195                 200                 205
Val Tyr Leu Trp Ser Ala Cys Thr Ser Gln Val Thr Arg Leu Cys Asp
          210                 215                 220
Leu Ser Val Glu Gly Asp Ser Val Thr Ser Val Gly Trp Ser Glu Arg
225                 230                 235                 240
Gly Asn Leu Val Ala Val Gly Thr His Lys Gly Phe Val Gln Ile Trp
          245                 250                 255
Asp Ala Ala Ala Gly Lys Lys Leu Ser Met Leu Glu Gly His Thr Ala
          260                 265                 270
Arg Val Gly Ala Leu Ala Trp Asn Ala Glu Gln Leu Ser Ser Gly Ser
          275                 280                 285
Arg Asp Arg Met Ile Leu Gln Arg Asp Ile Arg Thr Pro Pro Leu Gln
          290                 295                 300
Ser Glu Arg Arg Leu Gln Gly His Arg Gln Glu Val Cys Gly Leu Lys
305                 310                 315                 320
Trp Ser Thr Asp His Gln Leu Leu Ala Ser Gly Gly Asn Asp Asn Lys
                325                 330                 335
Leu Leu Val Trp Asn His Ser Ser Leu Ser Pro Val Gln Gln Tyr Thr
          340                 345                 350
Glu His Leu Ala Ala Val Lys Ala Ile Ala Trp Ser Pro His Gln His
          355                 360                 365
Gly Leu Leu Ala Ser Gly Gly Gly Thr Ala Asp Arg Cys Ile Arg Phe
          370                 375                 380
Trp Asn Thr Leu Thr Gly Gln Pro Leu Gln Cys Ile Asp Thr Gly Ser
385                 390                 395                 400
Gln Val Cys Asn Leu Ala Trp Ser Lys His Ala Asn Glu Leu Val Ser
                405                 410                 415
Thr His Gly Tyr Ser Gln Asn Gln Ile Leu Val Trp Lys Tyr Pro Ser
                420                 425                 430
Leu Thr Gln Val Ala Lys Leu Thr Gly His Ser Tyr Arg Val Leu Tyr
```

```
          435                    440                    445
Leu Ala Met Ser Pro Asp Gly Glu Ala Ile Val Thr Gly Ala Gly Asp
    450                    455                    460
Glu Thr Leu Arg Phe Trp Asn Val Phe Ser Lys Thr Arg Ser Thr Lys
465                    470                    475                    480
Val Lys Trp Glu Ser Val Ser Val Leu Asn Leu Phe Thr Arg Ile Arg
                       485                    490                    495
```

```
<210> 6027
<211> 305
<212> DNA
<213> Homo sapiens
```

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<400> 6027
nncccggggc tggggaagac caccctggca cacgtgattg cgcgtcacgc ggggtactct
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gtggtggaga tgaatgccag tgacgaccgt agcccggagg tcttccgcac acgcatcgag
120
gcggccacce aaatggagtc gggggcttggg gctgccggga agcccaactg cctggtcatc
180
gatgagatcg acggggcccc cgtggtgggc tccttgatgc ctgggtaggt gggtgggcgg
240
gcaggcaggc gggcagcagg gcctggactc accgtgtcct ctgacctccc ccaaggccgc
300
catca
305
```

```
<210> 6028
<211> 75
<212> PRT
<213> Homo sapiens
```

```
<400> 6028
Xaa Pro Gly Leu Gly Lys Thr Thr Leu Ala His Val Ile Ala Arg His
1                   5                    10                    15
Ala Gly Tyr Ser Val Val Glu Met Asn Ala Ser Asp Asp Arg Ser Pro
                   20                    25                    30
Glu Val Phe Arg Thr Arg Ile Glu Ala Ala Thr Gln Met Glu Ser Gly
         35                    40                    45
Leu Gly Ala Ala Gly Lys Lys Pro Asn Cys Leu Val Ile Asp Glu Ile Asp
    50                    55                    60
Gly Ala Pro Val Val Gly Ser Leu Met Pro Gly
65                    70                    75
```

```
<210> 6029
<211> 1350
<212> DNA
<213> Homo sapiens
```

```
<400> 6029
tttttttttt tttttttga tggaaaatag gatttattgg gggaaccgta caagcagagg
60
agaagcaggg gtgcccaggc tgtcacagcc ttgcagtgca tggtgggttc cgtggccaac
120
```

```
ttgccagggg acaggcctgt tgctggcact cccccacaa ttacagggtg ggagtgaagg
180
acctcgcggc tgcggacagg tccttgttag taaggaggag gctctgcagt cccggtgggg
240
tcatcttgcc tctccggact gctccctctg actggtgaag ccacactctg tgaagctgtc
300
tgacagaagg ggacacgcct ttgctgccca ggatggacct gggccaccca ggatgccgct
360
ggcctcagcc agggcacgtg tgcccagcgc tggctcctgc tgacccctgg actggctccc
420
atctcgggaa tgacgcctgc cgtgggaatc gtgggagagg ggttttaattt aacttggaag
480
gagcacagaa aggaaagtgt ggagtgcgga gcgaggcctc tggtttggcc ggctccggtt
540
gctggggatg gccacaccct ggcagcaggc ggcagagac caggaaggcc tacccagcac
600
ctgtccagaa aagattggtg tgggttgacc tggcctatgc ggggcagctc agtttgaagc
660
aggaacttcc ccaaacgtgc ccaggctcca agacagcagc attcactttg caccgtgctg
720
agcagagcgg ggcctcgcca ggtggaaagc cctaggaagg ctgcgtgctc tgcaaaccca
780
ggggtgctgt ggccgtacag caggggcgtc cgtgtccagg cagctttgtc atgtcttcca
840
aaggtcagga aggcgccacc gccctgcccc acgacagctg cgtctgcaag cgccagctct
900
gagcactgtt ctccgccgac atgaggacac catccaagaa ttcctcctgg gagacctcct
960
gaggagacgc gaagaccatc gatgctttgg aagaatgaaa agaagtttct gctaagccaa
1020
acctaggtgg atgggaagtg cctgtgtgga tgtgaagcca ccttgggtgg gcggctcgga
1080
gctcctctgc ccacatcgcc tcactgggac tcgccatcca gtctgacgtc tttgatgtcc
1140
ccataaatct gctggctttc aggagaacac gtcttgaagc acagctgaac ttgaatcttt
1200
tctgggtcct cctgctgggc cgtggtgggg agccgctccc gttgcctcaa ggcctccaag
1260
cctgccaggt caggctgatg gcagtggctg cgcatgacca tgatgcggtg gcccctggtt
1320
atgcgcggct tcggcagccc agccgagcct
1350

<210> 6030
<211> 99
<212> PRT
<213> Homo sapiens

<400> 6030
Met Gly Thr Ser Lys Thr Ser Asp Trp Met Ala Ser Pro Ser Glu Ala
1               5                   10                  15
Met Trp Ala Glu Glu Leu Arg Ala Ala His Pro Arg Trp Leu His Ile
            20                  25                  30
His Thr Gly Thr Ser His Pro Pro Arg Phe Gly Leu Ala Glu Thr Ser
```

```
          35                    40                    45
Phe His Ser Ser Lys Ala Ser Met Val Phe Ala Ser Pro Gln Glu Val
    50                    55                    60
Ser Gln Glu Glu Phe Leu Asp Gly Val Leu Met Ser Ala Glu Asn Ser
65                    70                    75                    80
Ala Gln Ser Trp Arg Leu Gln Thr Gln Leu Ser Trp Gly Arg Ala Val
              85                    90                    95
Ala Pro Ser
```

```
<210> 6031
<211> 1316
<212> DNA
<213> Homo sapiens

<400> 6031
nntctagacc agtatgcccc agatgtggcc gaactcatcc ggaccectat ggaaatgcgt
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tacatcectt tgaaagtggc cctgttctat ctcttaaatc cttacacgat tttgtcttgt
120
gttgccaagt ctacctgtgc catcaacaac accctcattg ctttcttcat tttgactacg
180
ataaaaggca gtgctttcct cagtgctatt tttcttgcct tagcgacata ccagtctctg
240
tacccactca ccttgtttgt cccaggactc ctctatctcc tccagcggca gtacatacct
300
gtgaaaatga agagcaaagc cttctggatc ttttcttggg agtatgccat gatgtatgtg
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420
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atcaacgtct tcttctacac catcccctta gccataaagc taaaggagca ccccatcttc
600
ttcatgttta tccagatcgc tgtcatcgcc atctttaagt cctacccgac agtgggggac
660
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720
atctttgtcc tcacctgcat catcatcgtc tgttccctgc tcttccctgt cctgtggcac
780
ctctggattt atgcaggaag tgccaactct aatttctttt atgccatcac actgaccttc
840
aacgttgggc agatcctgct catctctgat tacttctatg ccttcctgcg cggggagtac
900
tacctcacac atggcctcta cttgaccgcc aaggatggca cagaggccat gctcgtgctc
960
aagtaggcct ggctggcaca gggctgcatg gacctcaggg ggctgtgggg ccagaagctg
1020
ggccaagccc tccagccaga gttgccagca ggcgagtgct tgggcagaag aggttcgagt
1080
ccagggtcac aagtctctgg taccaaaagg gacccatggc tgactgacag caaggcctat
1140
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ggggaagaac tgggagctcc ccaacttgga cccccacctt gtggctctgc acaccaagga
1200
gcccctccc agacaggaag gagaagaggc aggtgagcag ggcttgttag attgtggcta
1260
cttaataaat gtttttttgtt atgaagtcta aaaaaaaaaa aaaaaaaaaa aaaaa
1316


<210> 6032
<211> 321
<212> PRT
<213> Homo sapiens

<400> 6032
Xaa Leu Asp Gln Tyr Ala Pro Asp Val Ala Glu Leu Ile Arg Thr Pro
1               5                   10                  15
Met Glu Met Arg Tyr Ile Pro Leu Lys Val Ala Leu Phe Tyr Leu Leu
            20                  25                  30
Asn Pro Tyr Thr Ile Leu Ser Cys Val Ala Lys Ser Thr Cys Ala Ile
        35                  40                  45
Asn Asn Thr Leu Ile Ala Phe Phe Ile Leu Thr Thr Ile Lys Gly Ser
    50                  55                  60
Ala Phe Leu Ser Ala Ile Phe Leu Ala Leu Ala Thr Tyr Gln Ser Leu
65                  70                  75                  80
Tyr Pro Leu Thr Leu Phe Val Pro Gly Leu Leu Tyr Leu Leu Gln Arg
                85                  90                  95
Gln Tyr Ile Pro Val Lys Met Lys Ser Lys Ala Phe Trp Ile Phe Ser
            100                 105                 110
Trp Glu Tyr Ala Met Met Tyr Val Gly Ser Leu Val Val Ile Ile Cys
        115                 120                 125
Leu Ser Phe Phe Leu Leu Ser Ser Trp Asp Phe Ile Pro Ala Val Tyr
    130                 135                 140
Gly Phe Ile Leu Ser Val Pro Asp Leu Thr Pro Asn Ile Gly Leu Phe
145                 150                 155                 160
Trp Tyr Phe Phe Ala Glu Met Phe Glu His Phe Ser Leu Phe Phe Val
                165                 170                 175
Cys Val Phe Gln Ile Asn Val Phe Phe Tyr Thr Ile Pro Leu Ala Ile
            180                 185                 190
Lys Leu Lys Glu His Pro Ile Phe Phe Met Phe Ile Gln Ile Ala Val
        195                 200                 205
Ile Ala Ile Phe Lys Ser Tyr Pro Thr Val Gly Asp Val Ala Leu Tyr
    210                 215                 220
Met Ala Phe Phe Pro Val Trp Asn His Leu Tyr Arg Phe Leu Arg Asn
225                 230                 235                 240
Ile Phe Val Leu Thr Cys Ile Ile Ile Val Cys Ser Leu Leu Phe Pro
                245                 250                 255
Val Leu Trp His Leu Trp Ile Tyr Ala Gly Ser Ala Asn Ser Asn Phe
            260                 265                 270
Phe Tyr Ala Ile Thr Leu Thr Phe Asn Val Gly Gln Ile Leu Leu Ile
        275                 280                 285
Ser Asp Tyr Phe Tyr Ala Phe Leu Arg Arg Glu Tyr Tyr Leu Thr His
    290                 295                 300
Gly Leu Tyr Leu Thr Ala Lys Asp Gly Thr Glu Ala Met Leu Val Leu
305                 310                 315                 320
Lys
```

<210> 6033
<211> 5157
<212> DNA
<213> Homo sapiens

<400> 6033
caattgctct atgtagtgcc ctttgttgcc aaagtcttag aatctagcat tcgtagtgtg
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gtttttaggc caccaaaccc ttggacaatg gcaattatga atgtattagc tgagctacat
120
caggagcatg acttaaagtt aaacttgaag tttgaaatcg aggttctctg caagaacctt
180
gcattagaca tcaatgagct aaaacctgga aacctcctaa aggataaaga tcgcctgaag
240
aatttagatg agcaactctc tgctccaagg aaagatgtca agcagccaga agaactccct
300
cccatcacaa ccacaacaac ttctactaca ccagctacca acaccacttg tacagccacg
360
gttccaccac agccacagta cagctaccac gacatcaatg tctattccct tgcgggcttg
420
gcaccacaca ttactctaaa tccaacaatt cccttgtttc aggcccatcc acagttgaag
480
cagtgtgtgc gtcaggcaat tgaacgggct gtccaggagc tggtccatcc tgtggtggat
540
cgatcaatta agattgccat gactacttgt gagcaaaatag tcaggaagga ttttgccctg
600
gattcggagg aatctcgaat gcgaatagca gctcatcaca tgatgcgtaa cttgacagct
660
ggaatggcta tgattacatg cagggaacct ttgctcatga gcatatctac caacttaaaa
720
aacagttttg cctcagccct tcgtactgct tccccacaac aaagagaaat gatggatcag
780
gcagctgctc aattagctca ggacaattgt gagttggctt gctgttttat tcagaagact
840
gcagtagaaa aagcaggccc tgagatggac aagagattag caactgaatt tgagctgaga
900
aaacatgcta ggcaagaagg acgcagatac tgtgatcctg ttgtttttaac atatcaagct
960
gaacggatgc cagagcaaat caggctgaaa gttggtggtg tggacccaaa gcagttggct
1020
gtttacgaag agtttgcacg caatgttcct ggcttcttac ctacaaatga cttaagtcag
1080
cccacgggat ttttagccca gcccatgaag caagcttggg caacagatga tgtagctcag
1140
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1200
gccatgaacc ctcaagctca ggctcttcga agtctcttgg aggttgtagt tttatctcga
1260
aactctcggg atgccatagc tgctcttgga ttgctccaaa aggctgtaga gggcttacta
1320
gatgccacaa gtggtgctga tgctgacctt ctgctgcgct acagggaatg ccacctcttg
1380

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gtcctaaaag ctctgcagga tggccgggca tatgggtctc catggtgcaa caaacagatc
1440
acaaggtgcc taattgaatg tcgagatgaa tataaatata atgtggaggc tgtggagctg
1500
ctaattcgca atcatttggt taatatgcag cagtatgatc ttcacctagc gcagtcaatg
1560
gagaatggct taaactacat ggctgtggca tttgctatgc agttagtaaa aatcctgctg
1620
gtggatgaaa ggagtgttgc tcatgttact gaggcagatc tgttccacac cattgaaacc
1680
ctcatgagga ttaatgctca ttccagaggc aatgctccag aaggattgcc ccagctgatg
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1860
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1920
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1980
caccagcaag gaatactgaa gaccgatgat ctcataacaa ggttctttcg tctgtgtact
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gaaatgtgtg ttgaaatcag ttaccgtgct caggctgagc agcagcacaa tcctgctgcc
2100
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2220
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2280
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2340
cctgagcatg tgttggaaac cattaatttc cagacactta cagctttctg caatacattc
2400
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2460
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2520
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<211> 1096
<212> PRT
<213> Homo sapiens

<400> 6034

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Arg Lys Asp Val Lys Gln Pro Glu Glu Leu Pro Pro Ile Thr Thr Thr
        35                  40                  45
Thr Thr Ser Thr Thr Pro Ala Thr Asn Thr Thr Cys Thr Ala Thr Val
    50                  55                  60
Pro Pro Gln Pro Gln Tyr Ser Tyr His Asp Ile Asn Val Tyr Ser Leu
65                  70                  75                  80
Ala Gly Leu Ala Pro His Ile Thr Leu Asn Pro Thr Ile Pro Leu Phe
                85                  90                  95
Gln Ala His Pro Gln Leu Lys Gln Cys Val Arg Gln Ala Ile Glu Arg
            100                 105                 110
Ala Val Gln Glu Leu Val His Pro Val Val Asp Arg Ser Ile Lys Ile
        115                 120                 125
Ala Met Thr Thr Cys Glu Gln Ile Val Arg Lys Asp Phe Ala Leu Asp
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Ser Glu Glu Ser Arg Met Arg Ile Ala Ala His His Met Met Arg Asn
145                 150                 155                 160
Leu Thr Ala Gly Met Ala Met Ile Thr Cys Arg Glu Pro Leu Leu Met
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Ser Ile Ser Thr Asn Leu Lys Asn Ser Phe Ala Ser Ala Leu Arg Thr
            180                 185                 190
Ala Ser Pro Gln Gln Arg Glu Met Met Asp Gln Ala Ala Ala Gln Leu
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Ala Gln Asp Asn Cys Glu Leu Ala Cys Cys Phe Ile Gln Leu Lys Thr Ala
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Val Glu Lys Ala Gly Pro Glu Met Asp Lys Arg Leu Ala Thr Glu Phe
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Glu Leu Arg Lys His Ala Arg Gln Glu Gly Arg Arg Tyr Cys Asp Pro
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Val Val Leu Thr Tyr Gln Ala Glu Arg Met Pro Glu Gln Ile Arg Leu
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Lys Val Gly Gly Val Asp Pro Lys Gln Leu Ala Val Tyr Glu Glu Phe
        275                 280                 285
Ala Arg Asn Val Pro Gly Phe Leu Pro Thr Asn Asp Leu Ser Gln Pro
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Thr Gly Phe Leu Ala Gln Pro Met Lys Gln Ala Trp Ala Thr Asp Asp
305                 310                 315                 320
Val Ala Gln Ile Tyr Asp Lys Cys Ile Thr Glu Leu Glu Gln His Leu
                325                 330                 335
His Ala Ile Pro Pro Thr Leu Ala Met Asn Pro Gln Ala Gln Ala Leu
            340                 345                 350
Arg Ser Leu Leu Glu Val Val Val Leu Ser Arg Asn Ser Arg Asp Ala
        355                 360                 365
Ile Ala Ala Leu Gly Leu Leu Gln Lys Ala Val Glu Gly Leu Leu Asp
    370                 375                 380
Ala Thr Ser Gly Ala Asp Ala Asp Leu Leu Leu Arg Tyr Arg Glu Cys
385                 390                 395                 400
His Leu Leu Val Leu Lys Ala Leu Gln Asp Gly Arg Ala Tyr Gly Ser
                405                 410                 415
Pro Trp Cys Asn Lys Gln Ile Thr Arg Cys Leu Ile Glu Cys Arg Asp
            420                 425                 430
Glu Tyr Lys Tyr Asn Val Glu Ala Val Glu Leu Leu Ile Arg Asn His
        435                 440                 445
Leu Val Asn Met Gln Gln Tyr Asp Leu His Leu Ala Gln Ser Met Glu
    450                 455                 460
Asn Gly Leu Asn Tyr Met Ala Val Ala Phe Ala Met Gln Leu Val Lys
465                 470                 475                 480
Ile Leu Leu Val Asp Glu Arg Ser Val Ala His Val Thr Glu Ala Asp
                485                 490                 495
Leu Phe His Thr Ile Glu Thr Leu Met Arg Ile Asn Ala His Ser Arg
            500                 505                 510
Gly Asn Ala Pro Glu Gly Leu Pro Gln Leu Met Glu Val Val Arg Ser
        515                 520                 525
Asn Tyr Glu Ala Met Ile Asp Arg Ala His Gly Gly Pro Asn Phe Met
    530                 535                 540
Met His Ser Gly Ile Ser Gln Ala Ser Glu Tyr Asp Asp Pro Pro Gly
545                 550                 555                 560
Leu Arg Glu Lys Ala Glu Tyr Leu Leu Arg Glu Trp Val Asn Leu Tyr
                565                 570                 575
His Ser Ala Ala Ala Gly Arg Asp Ser Thr Lys Ala Phe Ser Ala Phe
            580                 585                 590
Val Gly Gln Val Glu Leu Leu Glu Arg Lys Met His Gln Gln Gly Ile
        595                 600                 605
Leu Lys Thr Asp Asp Leu Ile Thr Arg Phe Phe Arg Leu Cys Thr Glu
    610                 615                 620
Met Cys Val Glu Ile Ser Tyr Arg Ala Gln Ala Glu Gln Gln His Asn
625                 630                 635                 640
Pro Ala Ala Asn Pro Thr Met Ile Arg Ala Lys Cys Tyr His Asn Leu
                645                 650                 655
Asp Ala Phe Val Arg Leu Ile Ala Leu Leu Val Lys His Ser Gly Glu
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Ala Thr Asn Thr Val Thr Lys Ile Asn Leu Leu Asn Lys Val Leu Gly
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Ile Val Val Gly Val Leu Leu Gln Asp His Asp Val Arg Gln Ser Glu
    690                 695                 700
Phe Gln Gln Leu Pro Tyr His Arg Ile Phe Ile Met Leu Leu Leu Glu
705                 710                 715                 720
Leu Asn Ala Pro Glu His Val Leu Glu Thr Ile Asn Phe Gln Thr Leu
                725                 730                 735
Thr Ala Phe Cys Asn Thr Phe His Ile Leu Arg Pro Thr Lys Ala Pro
                740                 745                 750
Gly Phe Val Tyr Ala Trp Leu Glu Leu Ile Ser His Arg Ile Phe Ile
    755                 760                 765
Ala Arg Met Leu Ala His Thr Pro Gln Gln Lys Gly Trp Pro Met Tyr
    770                 775                 780
Ala Gln Leu Leu Ile Asp Leu Phe Lys Tyr Leu Ala Pro Phe Leu Arg
785                 790                 795                 800
Asn Val Glu Leu Thr Lys Pro Met Gln Ile Leu Tyr Lys Gly Thr Leu
                805                 810                 815
Arg Val Leu Leu Val Leu Leu His Asp Phe Pro Glu Phe Leu Cys Asp
    820                 825                 830
Tyr His Tyr Gly Phe Cys Asp Val Ile Pro Pro Asn Cys Ile Gln Leu
    835                 840                 845
Arg Asn Leu Ile Leu Ser Ala Phe Pro Arg Asn Met Arg Leu Pro Asp
    850                 855                 860
Pro Phe Thr Pro Asn Leu Lys Val Asp Met Leu Ser Glu Ile Asn Ile
865                 870                 875                 880
Ala Pro Arg Ile Leu Thr Asn Phe Thr Gly Val Met Pro Pro Gln Phe
                885                 890                 895
Lys Lys Asp Leu Asp Ser Tyr Leu Lys Thr Arg Ser Pro Val Thr Phe
    900                 905                 910
Leu Ser Asp Leu Arg Ser Asn Leu Gln Val Ser Asn Glu Pro Gly Asn
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Arg Tyr Asn Leu Gln Leu Ile Asn Ala Leu Val Leu Tyr Val Gly Thr
    930                 935                 940
Gln Ala Ile Ala His Ile His Asn Lys Gly Ser Thr Pro Ser Met Ser
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Thr Ile Thr His Ser Ala His Met Asp Ile Phe Gln Asn Leu Ala Val
                965                 970                 975
Asp Leu Asp Thr Glu Gly Arg Tyr Leu Phe Leu Asn Ala Ile Ala Asn
                980                 985                 990
Gln Leu Arg Tyr Pro Asn Ser His Thr His Tyr Phe Ser Cys Thr Met
    995                 1000                1005
Leu Tyr Leu Phe Ala Glu Ala Asn Thr Glu Ala Ile Gln Glu Gln Ile
    1010                1015                1020
Thr Arg Val Leu Leu Glu Arg Leu Ile Val Asn Arg Pro His Pro Trp
1025                1030                1035                1040
Gly Leu Leu Ile Thr Phe Ile Glu Leu Ile Lys Asn Pro Ala Phe Lys
                1045                1050                1055
Phe Trp Asn His Glu Phe Val His Cys Ala Pro Glu Ile Glu Lys Leu
                1060                1065                1070
Phe Gln Ser Val Ala Gln Cys Cys Met Gly Gln Lys Gln Ala Gln Gln
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<211> 320
<212> DNA
<213> Homo sapiens

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<210> 6036
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<212> PRT
<213> Homo sapiens

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Ser Asn Leu Phe Ser Cys Cys Gln Val Glu Pro His Ile Gln Gly Leu
            20   25   30
Arg Gln Val Leu Gln Glu Pro Ser Arg Glu Pro Pro Gly Trp Leu Gly
        35   40   45
Ala Trp Pro Arg Ser Gln Ser His Asn Ala His His Cys Pro Thr Met
    50   55   60
Pro Phe Arg Met Glu Pro Leu Ile His Trp Ala His Ser His Gly Gln
65   70   75   80
Arg Asp Tyr Pro Trp Thr Met Ile Glu Thr Leu Pro Ile Pro Gln Thr
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Gln Gln Gly Leu Cys Asp
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<212> DNA
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<212> PRT
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His Gly Gly Thr Cys Ser Arg Gln Glu Leu Gly Val Ser Asp Val Leu
        35                  40                  45
Gly Tyr Val His Pro Asp Leu Leu Lys Asp Phe Cys Met Asn Pro Gln
    50                  55                  60
Thr Val Leu Leu Leu Arg Val Ile Ala Ala Phe Cys Phe Leu Gly Ile
65                  70                  75                  80
Leu Cys Ser Leu Ser Ala Phe Leu Leu Asp Val Phe Gly Pro Lys His
                85                  90                  95
Pro Ala Leu Lys Ile Thr Arg Arg Tyr Ala Phe Ala His Ile Leu Thr
            100                 105                 110
Val Leu Gln Cys Ala Thr Val Ile Gly Phe Ser Tyr Trp Ala Ser Glu
        115                 120                 125
Leu Ile Leu Ala Gln Gln Gln Gln His Lys Lys Tyr His Gly Ser Gln
    130                 135                 140
Val Tyr Val Thr Phe Ala Val Ser Phe Tyr Leu Val Ala Gly Ala Gly
145                 150                 155                 160
Gly Ala Ser Ile Leu Ala Thr Ala Ala Asn Leu Leu Arg His Tyr Pro
                165                 170                 175
Thr Glu Glu Glu Glu Gln Ala Leu Glu Leu Leu Ser Glu Met Glu Glu
            180                 185                 190
Asn Glu Pro Tyr Pro Ala Glu Tyr Glu Val Ile Asn Gln Phe Gln Pro
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Pro Pro Ala Tyr Thr Pro
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<211> 1130
<212> DNA
<213> Homo sapiens

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Xaa Gly Leu Ala Ile Leu Phe Ile His Ala Ala Ala Trp Ala Ser Glu
 1               5                  10                  15
Gly Leu Leu Ala Val Leu Arg Ala Gly Pro Gly Pro Glu Ala Leu Leu
```

```
              20                  25                  30
Gln Val Trp Ala Ala Glu Ser Ala Leu Arg Gly Glu Pro Leu Trp Ala
        35                  40                  45
Gln Asn Val Val Pro Glu Ala Glu Gly Glu Asp Asp Pro Ala Gly Glu
        50                  55                  60
Ala Gln Ala Gly Arg Leu Pro Leu Leu Pro Cys Ala Arg Ala Tyr Val
65                  70                  75                  80
Ser Pro Arg Ala Pro Phe Tyr Arg Pro Leu Ala Pro Glu Leu Arg Ala
                85                  90                  95
Arg Gln Leu Glu Leu Gly Ala Glu His Ala Leu Leu Leu Gly Ala Ala
            100                 105                 110
Gly Gln Val Phe Ser Trp Gly Gly Arg His Gly Gln Leu Gly His
        115                 120                 125
Gly Thr Leu Glu Ala Glu Leu Glu Pro Arg Leu Leu Glu Ala Leu Gln
        130                 135                 140
Gly Leu Val Met Ala Glu Val Ala Ala Gly Gly Trp His Ser Val Cys
145                 150                 155                 160
Val Ser Glu Thr Gly Asp Ile Tyr Ile Trp Gly Trp Asn Glu Ser Gly
                165                 170                 175
Gln Leu Ala Leu Pro Thr Arg Asn Leu Ala Glu Asp Gly Glu Thr Val
            180                 185                 190
Ala Arg Glu Ala Thr Glu Leu Asn Glu Asp Gly Ser Gln Val Lys Arg
        195                 200                 205
Thr Gly Gly Ala Glu Asp Gly Ala Pro Phe Ile Ala Val Gln
        210                 215                 220
Pro Phe Pro Ala Leu Leu Asp Leu Pro Met Gly Ser Asp Ala Val Lys
225                 230                 235                 240
Ala Ser Cys Gly Ser Arg His Thr Ala Val Val Thr Arg Thr Gly Glu
            245                 250                 255
Leu Tyr Thr Trp Gly Trp Gly Lys Tyr Gly Gln Leu Gly His Glu Asp
        260                 265                 270
Thr Thr Ser Leu Asp Arg Pro Arg Arg Val Glu Tyr Phe Val Asp Lys
        275                 280                 285
Gln Leu Gln Val Lys Ala Val Thr Cys Gly Pro Trp Asn Thr Tyr Val
        290                 295                 300
Tyr Ala Val Glu Lys Gly Lys Ser
305                 310
```

```
<210> 6041
<211> 291
<212> DNA
<213> Homo sapiens

<400> 6041
acgcgtgaag gggaagaaag agaacgtctg caaaaggagg aagagaaacg taggagagaa
60
gaagaggaaa ggcttcgacg ggaggaagag gaaaggagac ggatagaaga agaaaggctt
120
cggttggagc agcaaaagca gcagataatg gcagctttaa actcccagac tgccgtgcag
180
ttccagcagt atgcagccca acagtatcca gggaactacg aacagcagca aattctcatc
240
cgccagttgc aggagcaaca ctatcagcag tacatgcagc agttgtatca c
291
```

```
<210> 6042
<211> 97
<212> PRT
<213> Homo sapiens

<400> 6042
Thr Arg Glu Gly Glu Glu Arg Glu Arg Leu Gln Lys Glu Glu Glu Lys
1               5                   10                  15
Arg Arg Arg Glu Glu Glu Glu Arg Leu Arg Arg Glu Glu Glu Glu Arg
            20                  25                  30
Arg Arg Ile Glu Glu Glu Arg Leu Arg Leu Glu Gln Glu Lys Gln Gln
        35                  40                  45
Ile Met Ala Ala Leu Asn Ser Gln Thr Ala Val Gln Phe Gln Gln Tyr
    50                  55                  60
Ala Ala Gln Gln Tyr Pro Gly Asn Tyr Glu Gln Gln Ile Leu Ile
65                  70                  75                  80
Arg Gln Leu Gln Glu Gln His Tyr Gln Gln Tyr Met Gln Gln Leu Tyr
            85                  90                  95
His


<210> 6043
<211> 558
<212> DNA
<213> Homo sapiens

<400> 6043
tttttttttt tttttttttt tttgacattc aaacacaagc tttaatagga gatatcaagg     60
cacagggtgg agggagggggg ttgctccagg gaattctgaa tgtcccagtt catgcagaag    120
ttcaaggtgt cttgtacaac ccactgggga aacaggatct gggaccggtg cgggcacatt    180
ctcctggccc agcacagggg cggtgccacc cacattcggc ccgggtcttg cctaatacat    240
gttttggtaa acactcggtc agagcaccct ctgtttttc cagtcccgaa gctccccgca     300
ggaatccaca cccccgcccc accctctcg ggacacggat tcaatgtccc tggtgggtca     360
tctgtgcctt tcggcctgtg atgtgattcg agcggtgcta tctttaacct cgggcagggg    420
tgttctcccc cgtcgacgtt gctcagataa cagtcctgca attccatggg ggtggcggca    480
cccggggtct ggcaaagcat aggggcctgc ttgtgtcccc tgctgctgcc ccaagtagtc    540
agaggaggat gtgaattc                                                  558


<210> 6044
<211> 152
<212> PRT
<213> Homo sapiens
```

<400> 6044
```
Met Leu Cys Gln Thr Pro Gly Ala Ala Thr Pro Met Glu Leu Gln Asp
1               5                   10                  15
Cys Tyr Leu Ser Asn Val Asp Gly Gly Glu His Pro Cys Pro Arg Leu
            20                  25                  30
Lys Ile Ala Pro Leu Glu Ser His His Arg Pro Lys Arg Pro Asp Asp
        35                  40                  45
Pro Pro Gly Thr Leu Asn Pro Cys Pro Glu Arg Gly Gly Ala Gly Val
    50                  55                  60
Trp Ile Pro Ala Gly Ser Phe Gly Thr Gly Lys Asn Arg Gly Cys Ser
65                  70                  75                  80
Asp Arg Val Phe Thr Lys Thr Cys Ile Arg Gln Asp Pro Gly Val Met
                85                  90                  95
Trp Val Ala Pro Pro Leu Cys Trp Ala Arg Arg Met Cys Pro His Arg
            100                 105                 110
Ser Gln Ile Leu Phe Pro Gln Trp Val Val Gln Asp Thr Leu Asn Phe
        115                 120                 125
Cys Met Asn Trp Asp Ile Gln Asn Ser Leu Glu Gln Pro Pro Pro Ser
    130                 135                 140
Thr Leu Cys Leu Asp Ile Ser Tyr
145                 150
```

<210> 6045
<211> 1916
<212> DNA
<213> Homo sapiens

<400> 6045
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acgcgtgtcg agacgcactt ccagccccgc ggcgctggcg aaggtggccc ctacggctgc
60
aaggacgctc tgcgccagca gctccgctcg gcgcgagagg tgattgcagt ggtcatggac
120
gtgttcacag acatcgacat cttcagagac ctgcaagaaa tatgcaggaa acagggagtt
180
gctgtgtata tccttctgga ccaggctctc ctctctcaat ttctggatat gtgcatggat
240
ctgaaagttc atcctgaaca ggaaaagtta atgacagttc ggactatcac aggaaatatc
300
tactatgcaa ggtcaggaac taagattatt gggaaggttc acgaaaagtt cacgttgatt
360
gatggcatcc gcgtggcaac aggctcctac agttttacat ggacggatgg caaattaaac
420
agcagtaact tggtaattct gtctggccaa gtggttgaac actttgatct ggagttccga
480
atcctgtatg cccagtccaa gcccatcagc cccaaactcc tgtctcactt ccagagcagc
540
aacaagtttg atcacctcac caaccgaaaa ccacagtcca aggagctcac cctgggcaac
600
ctgctgcgga tgcggctggc taggctgtca agtactccca ggaaggcgga cctggaccca
660
gagatgcccg cagagggcaa ggcagagcgc aagcccatg actgtgagtc ctctactgtt
720
agtgaggaag actacttcag cagccacagg gacgagctcc agagcagaaa ggccattgac
780
```

```
gctgccactc aaacagagcc aggagaggag atgccagggc tgagtgtgag tgaggtggga
840
acacaaacca gcatcaccac agcatgtgct ggtacccaga ctgcagtcat caccaggata
900
gcaagctctc aaaccacgat ttggtccaga tcgaccacta ctcagactga catggatgag
960
aacattctct ttcctcgagg aactcaatct acagaagggt caccagtctc aaaaatgtct
1020
gtatcgagat cttccagttt gaagtcttcc tcctctgtgt cttcccaagg ctctgtggca
1080
agctccactg gttctcccgc ttccatcaga accactgact tccacaatcc tggctatccc
1140
aagtacctgg gcaccccccca cctggaactg tacttgagtg actcacttag aaacttgaac
1200
aaagagcggc aattccactt cgctggtatc aggtcccggc tcaaccacat gctggctatg
1260
ctgtcaagga gaacactctt tactgaaaac caccttggcc ttcattctgg caatttcagc
1320
agagttaatt tgcttgctgt tagagatgta gcactttatc cttcctatca gtaactgctc
1380
cgtgttcaga ctcctggttt cttccaggct tacagtggac atcatcagct tcctgcttta
1440
aaaaatatct tatgtcccta attgcctttc ttttacctga ctttgtcacc tttgttgtct
1500
ttgaattctt taggctgcat attattttac atgctttgtt ttgtcatgta tataccaggt
1560
attggtttta tggtttaaac actatggata caggggtttg ttttgcacaa ttttaatagt
1620
catgcactac ataatgatgt tttggtcaat gacagaccac gtatatgttg gcagtctcat
1680
aagattataa tactgtattt ttactatacc ttttctgtgt ttagatacaa ataccattat
1740
gttacagttg cctacagtat tcagtgcagt aacatgatgt acaggtttgt agcctgtttt
1800
gcattttct taggttgtat gctcttctgt tttaaaggtt tgaatcacca gcattttttgt
1860
gatcaaaatc ctatttagaa aaaataaaac tactttctgt ttaaaaaaaa aacaaa
1916

<210> 6046
<211> 457
<212> PRT
<213> Homo sapiens

<400> 6046
```

Thr Arg Val Glu Thr His Phe Gln Pro Arg Gly Ala Gly Glu Gly Gly
1   5   10   15
Pro Tyr Gly Cys Lys Asp Ala Leu Arg Gln Gln Leu Arg Ser Ala Arg
            20   25   30
Glu Val Ile Ala Val Val Met Asp Val Phe Thr Asp Ile Asp Ile Phe
        35   40   45
Arg Asp Leu Gln Glu Ile Cys Arg Lys Gln Gly Val Ala Val Tyr Ile
    50   55   60
Leu Leu Asp Gln Ala Leu Leu Ser Gln Phe Leu Asp Met Cys Met Asp

```
65                      70                    75                    80
Leu Lys Val His Pro Glu Gln Glu Lys Leu Met Thr Val Arg Thr Ile
                    85                    90                    95
Thr Gly Asn Ile Tyr Tyr Ala Arg Ser Gly Thr Lys Ile Ile Gly Lys
                100                   105                   110
Val His Glu Lys Phe Thr Leu Ile Asp Gly Ile Arg Val Ala Thr Gly
            115                   120                   125
Ser Tyr Ser Phe Thr Trp Thr Asp Gly Lys Leu Asn Ser Ser Asn Leu
        130                   135                   140
Val Ile Leu Ser Gly Gln Val Val Glu His Phe Asp Leu Glu Phe Arg
145                   150                   155                   160
Ile Leu Tyr Ala Gln Ser Lys Pro Ile Ser Pro Lys Leu Leu Ser His
                165                   170                   175
Phe Gln Ser Ser Asn Lys Phe Asp His Leu Thr Asn Arg Lys Pro Gln
            180                   185                   190
Ser Lys Glu Leu Thr Leu Gly Asn Leu Leu Arg Met Arg Leu Ala Arg
        195                   200                   205
Leu Ser Ser Thr Pro Arg Lys Ala Asp Leu Asp Pro Glu Met Pro Ala
210                   215                   220
Glu Gly Lys Ala Glu Arg Lys Pro His Asp Cys Glu Ser Ser Thr Val
225                   230                   235                   240
Ser Glu Glu Asp Tyr Phe Ser Ser His Arg Asp Glu Leu Gln Ser Arg
                245                   250                   255
Lys Ala Ile Asp Ala Ala Thr Gln Thr Glu Pro Gly Glu Glu Met Pro
            260                   265                   270
Gly Leu Ser Glu Val Ser Glu Val Gly Thr Gln Thr Ser Ile Thr Thr Ala
        275                   280                   285
Cys Ala Gly Thr Gln Thr Ala Val Ile Thr Arg Ile Ala Ser Ser Gln
        290                   295                   300
Thr Thr Ile Trp Ser Arg Ser Thr Thr Thr Gln Thr Asp Met Asp Glu
305                   310                   315                   320
Asn Ile Leu Phe Pro Arg Gly Thr Gln Ser Thr Glu Gly Ser Pro Val
                325                   330                   335
Ser Lys Met Ser Val Ser Arg Ser Ser Ser Leu Lys Ser Ser Ser Ser
            340                   345                   350
Val Ser Ser Gln Gly Ser Val Ala Ser Ser Thr Gly Ser Pro Ala Ser
        355                   360                   365
Ile Arg Thr Thr Asp Phe His Asn Pro Gly Tyr Pro Lys Tyr Leu Gly
        370                   375                   380
Thr Pro His Leu Glu Leu Tyr Leu Ser Asp Ser Leu Arg Asn Leu Asn
385                   390                   395                   400
Lys Glu Arg Gln Phe His Phe Ala Gly Ile Arg Ser Arg Leu Asn His
                405                   410                   415
Met Leu Ala Met Leu Ser Arg Arg Thr Leu Phe Thr Glu Asn His Leu
            420                   425                   430
Gly Leu His Ser Gly Asn Phe Ser Arg Val Asn Leu Leu Ala Val Arg
        435                   440                   445
Asp Val Ala Leu Tyr Pro Ser Tyr Gln
    450                   455
```

```
<210> 6047
<211> 773
<212> DNA
<213> Homo sapiens
```

<400> 6047

ggatcctgac ccccgagctt gcgcccctcg ggccctccat tcagtcccgg gccgacagcg
60
ccaccgtgtg gccacagcgt ctcctagcgg cctccttacc taggggtcgg gtgagctcct
120
gatgggaaat gggggatctc atcgcttgtg agtagaggag actttggggg gaaagtgatg
180
gaggatgggg caagggatcc ggtgtccaac tctgtgtgtc cctgcagctc ccgtagccca
240
gcagggaaga tgaccttctg gcccctaagc aggcggaagg caggtggccg ccgccggagc
300
aatggtgcaa acagctcttc tccagtgtgg tccccgtgct gctggggac ccagaggagg
360
agccgggtgg gcggcagctc ctggacctca attgcttttt gtccgacatc tcggacactc
420
tcttcaccat gactcagtcc ggcccttcgc ccctgcagct gccgcctgag gatgcctacg
480
tcggcaatgc tgacatgatc cagccggacc tgacgccact gcagccaagc ctggatgact
540
tcatggacat ctcagatttc tttaccaact cccgcctccc acagccgccc atgccttcaa
600
acttcccaga gccccccaac ttcagccccg tggttgactc cctcttcagc agtgggaccc
660
tgggcccaga ggtgcccccg gcttcctcgg ccatgaccca cctctctgga cacagccgtc
720
tgcaggctcg gaacagctgc cctgcccctg tgcctgctac taaatgaatt gcg
773

<210> 6048
<211> 129
<212> PRT
<213> Homo sapiens

<400> 6048
Met Val Lys Arg Val Ser Glu Met Ser Asp Lys Lys Gln Leu Arg Ser
1   5   10   15
Arg Ser Cys Arg Pro Pro Gly Ser Ser Ser Gly Ser Pro Ser Ser Thr
                20   25   30
Gly Thr Thr Leu Glu Lys Ser Cys Leu His His Cys Ser Gly Gly Gly
            35   40   45
His Leu Pro Ser Ala Cys Ser Gly Ala Arg Arg Ser Ser Ser Leu Leu
        50   55   60
Gly Tyr Gly Ser Cys Arg Asp Thr Gln Ser Trp Thr Pro Asp Pro Leu
65   70   75   80
Pro His Pro Pro Ser Leu Ser Pro Gln Ser Leu Leu Tyr Ser Gln Ala
                85   90   95
Met Arg Ser Pro Ile Ser His Gln Glu Leu Thr Arg Pro Leu Gly Lys
                100   105   110
Glu Ala Ala Arg Arg Arg Cys Gly His Thr Val Ala Leu Ser Ala Arg
        115   120   125
Asp

```
<210> 6049
<211> 479
<212> DNA
<213> Homo sapiens

<400> 6049
accggtttt cttcccccag tccctcagct gctgctgctg ctcaggaggt cagatctgcc
60
actgatggta ataccagcac cactccgccc acctctgcca agaagagaaa gttaaacagc
120
agcagcagta gcagcagtaa cagtagtaac gagagagaag actttgattc cacctcttcc
180
tcctcttcca ctcctctttt acaacccagg gattcggcat ccccttcaac ctcgtccttc
240
tgcctggggg tttcagtggc tgcttccagc cacgtaccga tacagaagaa gctgcgtttt
300
gaagacaccc tggagtttgt agggtttgat gcgaagatgg ctgaggaatc ctcctcctcc
360
tcctcctcat cttcaccaac tgctgcaaca tctcaggagc agcaacttaa aaataagagt
420
atattaatct cttctgtggg ttcggtgcat catgcagacg ggctagccga atcttctac
479

<210> 6050
<211> 159
<212> PRT
<213> Homo sapiens

<400> 6050
Thr Gly Phe Ser Ser Pro Ser Pro Ser Ala Ala Ala Ala Ala Gln Glu
1               5                   10                  15
Val Arg Ser Ala Thr Asp Gly Asn Thr Ser Thr Thr Pro Pro Thr Ser
            20                  25                  30
Ala Lys Lys Arg Lys Leu Asn Ser Ser Ser Ser Ser Ser Ser Asn Ser
        35                  40                  45
Ser Asn Glu Arg Glu Asp Phe Asp Ser Thr Ser Ser Ser Ser Thr
    50                  55                  60
Pro Pro Leu Gln Pro Arg Asp Ser Ala Ser Pro Ser Thr Ser Ser Phe
65                  70                  75                  80
Cys Leu Gly Val Ser Val Ala Ala Ser His Val Pro Ile Lys
                85                  90                  95
Lys Leu Arg Phe Glu Asp Thr Leu Glu Phe Val Gly Phe Asp Ala Lys
                100                 105                 110
Met Ala Glu Glu Ser Ser Ser Ser Ser Ser Ser Ser Pro Thr Ala
        115                 120                 125
Ala Thr Ser Gln Glu Gln Gln Leu Lys Asn Lys Ser Ile Leu Ile Ser
    130                 135                 140
Ser Val Gly Ser Val His His Ala Asp Gly Leu Ala Glu Ser Ser
145                 150                 155

<210> 6051
<211> 2404
<212> DNA
<213> Homo sapiens
```

<400> 6051

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attaacaatg gaagtgataa aggaaatcag caagagaaag aaaggtctgt ggatttaaac
60
tttcttccat cggttgatcc tgaaacagtt cttcagacag ggcatgaatt gttgtccgaa
120
ttacagcagc gtcgatttaa tggctcagac ggagggggttt catggtctcc tatggatgat
180
gaacttcttg cacagccaca ggttatgaaa ttattagatt cactccgaga gcaatatacc
240
cgctaccagg aagtttgtag gcaacgtagc aagcgcacac agttagaaga gattcaacag
300
aaggtaatgc aggtggtgaa ctggctagaa gggcctggat cagaacaact aagagcccag
360
tggggcattg gagactccat tagggcctcc caggccctac agcagaaaca cgaagagatt
420
gagagccagc acagtgaatg gtttgcagtg tatgtggaac ttaatcagca aattgcagca
480
ctcttgaatg ctggcgatga ggaagatctt gtggaactaa agtcactgca gcaacaactt
540
agtgatgttt gttatcgaca ggccagtcag ctggaattta ggcaaaatct cttacaagca
600
gctcttgaat ttcatggtgt tgcccaagat ttgtctcagc agttggatgg cttattgggg
660
atgttgtgcg tagatgtagc accagctgat ggagcatcga ttcagcaaac tttaaaactg
720
cttgaagaga agctgaaaag tgttgatgtg ggattgcaag gtttgcgtga aaaaggtcaa
780
ggtctcctgg atcagatctc caatcaggca tccnntgggc ctatggaaag gatgntaacc
840
attgaaaata aagaaaatgt ggaccacata caaggagtga tggaagatat gcagcttaga
900
aaacaaagat gtgaagacat ggtagatgtg cgaaggttaa agatgcttca gatggtgcag
960
ttgtttaaat gtgaagaaga tgctgccaag gcagtagaat ggctaagtga acttctggat
1020
gctctgctta agactcacat cagattgggc gatgatgctc aagaaacgaa agttttgctg
1080
gaaaagcata gaaaaatttgt tgatgttgca cagagcactt atgactatgg caggcagttg
1140
ctacaggcca cagttgtgtt atgccagtct ttgcgctgca cttctcggtc atctgggggat
1200
acacttcctc gactgaacag agtatggaaa caatttacaa tagcatctga agagagagta
1260
catagattgg aaatggctat tgcatttcac tcaaatgctg aaaagatttt gcaggactgt
1320
ccagaagagc ctgaagctat taatgatgag gagcaatttg atgaaattga agcagttggg
1380
aaatcacttt tggatagatt aactgttcca gtagtttatc ctgatggaac cgaacaatat
1440
tttgggagtc caagtgacat ggcttctact gcagaaaaca tcagagacag gatgaaacta
1500
gttaatctca aaaggcagca gctgagacat cctgaaatgg tgaccacaga gagctaatag
1560
```

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ctaccagcta cctacagatt tgcagttcat aatcccgcat gttgtcaaca tactacagca
1620
ttagccacca caccttaaga tgcatttcac agccaaaata agtctcattt cttttcatga
1680
cacatttctc tttacatgtt aacaccttgc tactaccaag gcataattac ttaacatgct
1740
tcgaggctgt agattccaag tatcttaaaa gaaggaacta taaacattgc actgaaaact
1800
tgctttaaag cttacctga cctgtcagtt tgtagacaaa caactgataa taagctttga
1860
atggtgctaa taagagtagg aattctctct attaaaaaga aaaaaaaag ttgcccttcc
1920
tccacaggtg atttagtaaa tttagacagt agttaaactc ttgttagtag acagtggtgt
1980
cctcaaaatt ttactttgta attcttcaga attgattatt tttattgtgt caatacagag
2040
aaagcctttc agatctttga tatatcatag tcattaaaag acctttcct atttgtattg
2100
ataatgtatt aaaagttgtt tgtgcttaat aaaagacttc tttaaacatc ttatttaatt
2160
tagtagttac atcctatttc caaacatgag tgccttattt aaaagggcat tcttaggact
2220
gtgaggatgg tttaatattt gttttttcat ggtggttgca tgtatttag acaggaaata
2280
catatgtaag catgtgtata taataaataa gcatgtttta tcatgaaaaa ttattgtgaa
2340
caatttagat cttaagaac ttattaataa tggaatacta tttctaattg ttctcttttt
2400
caac
2404


<210> 6052
<211> 518
<212> PRT
<213> Homo sapiens

<400> 6052
Ile Asn Asn Gly Ser Asp Lys Gly Asn Gln Gln Glu Lys Glu Arg Ser
 1               5                   10                  15
Val Asp Leu Asn Phe Leu Pro Ser Leu Asp Pro Glu Thr Arg Leu Gln
                20                  25                  30
Thr Gly His Glu Leu Leu Ser Glu Leu Gln Gln Arg Arg Phe Asn Gly
        35                  40                  45
Ser Asp Gly Gly Val Ser Trp Ser Pro Met Asp Asp Glu Leu Leu Ala
    50                  55                  60
Gln Pro Gln Val Met Lys Leu Leu Asp Ser Leu Arg Glu Gln Tyr Thr
65                  70                  75                  80
Arg Tyr Gln Glu Val Cys Arg Gln Arg Ser Lys Arg Thr Gln Leu Glu
                85                  90                  95
Glu Ile Gln Gln Lys Val Met Gln Val Val Asn Trp Leu Glu Gly Pro
                100                 105                 110
Gly Ser Gln Gln Leu Arg Ala Gln Trp Gly Ile Gly Asp Ser Ile Arg
        115                 120                 125
Ala Ser Gln Ala Leu Gln Gln Lys His Glu Glu Ile Glu Ser Gln His
```

```
    130                    135                     140
Ser Glu Trp Phe Ala Val Tyr Val Glu Leu Asn Gln Gln Ile Ala Ala
145                    150                    155                  160
Leu Leu Asn Ala Gly Asp Glu Glu Asp Leu Val Glu Leu Lys Ser Leu
                   165                    170                   175
Gln Gln Gln Leu Ser Asp Val Cys Tyr Arg Gln Ala Ser Gln Leu Glu
               180                    185                   190
Phe Arg Gln Asn Leu Leu Gln Ala Ala Leu Glu Phe His Gly Val Ala
           195                    200                   205
Gln Asp Leu Ser Gln Gln Leu Asp Gly Leu Leu Gly Met Leu Cys Val
       210                    215                   220
Asp Val Ala Pro Ala Asp Gly Ala Ser Ile Gln Gln Thr Leu Lys Leu
225                    230                    235                  240
Leu Glu Glu Lys Leu Lys Ser Val Asp Val Gly Leu Gln Gly Leu Arg
                   245                    250                   255
Glu Lys Gly Gln Gly Leu Leu Asp Gln Ile Ser Asn Gln Ala Ser Xaa
           260                    265                   270
Gly Pro Met Glu Arg Met Xaa Thr Ile Glu Asn Lys Glu Asn Val Asp
       275                    280                   285
His Ile Gln Gly Val Met Glu Asp Met Gln Leu Arg Lys Gln Arg Cys
   290                    295                    300
Glu Asp Met Val Asp Val Arg Arg Leu Lys Met Leu Gln Met Val Gln
305                    310                    315                  320
Leu Phe Lys Cys Glu Glu Asp Ala Ala Lys Ala Val Glu Trp Leu Ser
                   325                    330                   335
Glu Leu Leu Asp Ala Leu Leu Lys Thr His Ile Arg Leu Gly Asp Asp
               340                    345                   350
Ala Gln Glu Thr Lys Val Leu Leu Glu Lys His Arg Lys Phe Val Asp
           355                    360                   365
Val Ala Gln Ser Thr Tyr Asp Tyr Gly Arg Gln Leu Leu Gln Ala Thr
       370                    375                   380
Val Val Leu Cys Gln Ser Leu Arg Cys Thr Ser Arg Ser Ser Gly Asp
385                    390                    395                  400
Thr Leu Pro Arg Leu Asn Arg Val Trp Lys Gln Phe Thr Ile Ala Ser
                   405                    410                   415
Glu Glu Arg Val His Arg Leu Glu Met Ala Ile Ala Phe His Ser Asn
           420                    425                   430
Ala Glu Lys Ile Leu Gln Asp Cys Pro Glu Glu Pro Glu Ala Ile Asn
       435                    440                   445
Asp Glu Glu Gln Phe Asp Glu Ile Glu Ala Val Gly Lys Ser Leu Leu
   450                    455                    460
Asp Arg Leu Thr Val Pro Val Val Tyr Pro Asp Gly Thr Glu Gln Tyr
465                    470                    475                  480
Phe Gly Ser Pro Ser Asp Met Ala Ser Thr Ala Glu Asn Ile Arg Asp
                   485                    490                   495
Arg Met Lys Leu Val Asn Leu Lys Arg Gln Gln Leu Arg His Pro Glu
           500                    505                   510
Met Val Thr Thr Glu Ser
           515

<210> 6053
<211> 3257
<212> DNA
<213> Homo sapiens
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<400> 6053
nngggccccct tgtcaggagg agacagcctc ccggcccggg gaggacaagt cgctgccacc
60
tttggctgcc gacgtgattc cctgggacgg tccgtttcct gccgtcagct gccggccgag
120
ttgggtctcc gtggttcagg ccggctcccc cttcctggtc tcccttctcc cgctgggccg
180
gtttatcggg aggagattgt cttccagggc tagcaattgg acttttgatg atgtttgacc
240
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1440
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2760
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gactatgaag aaaggacttt caaggagata tagtgtgaac aggatcagga aggtagaggg
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attatattta cttaagagaa caagctctat attaggatat tgttttgaag cagatggatg
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3257


<210> 6054
<211> 382
<212> PRT
<213> Homo sapiens

<400> 6054
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                20                  25                  30
Glu Lys Leu Pro Gly Arg Asn Thr Phe Cys Cys Asp Gly Arg Val Met
        35                  40                  45
Met Ala Arg Gln Lys Gly Ile Phe Tyr Leu Thr Leu Phe Leu Ile Leu
    50                  55                  60
Gly Thr Cys Thr Leu Phe Phe Ala Phe Glu Cys Arg Tyr Leu Ala Val
65                  70                  75                  80
Gln Leu Ser Pro Ala Ile Pro Val Phe Ala Ala Met Leu Phe Leu Phe
                85                  90                  95
Ser Met Ala Thr Leu Leu Arg Thr Ser Phe Ser Asp Pro Gly Val Ile
                100                 105                 110
Pro Arg Ala Leu Pro Asp Glu Ala Ala Phe Ile Glu Met Glu Ile Glu
        115                 120                 125
Ala Thr Asn Gly Ala Val Pro Gln Gly Gln Arg Pro Pro Pro Arg Ile
    130                 135                 140
Lys Asn Phe Gln Ile Asn Asn Gln Ile Val Lys Leu Lys Tyr Cys Tyr
145                 150                 155                 160
Thr Cys Lys Ile Phe Arg Pro Pro Arg Ala Ser His Cys Ser Ile Cys
                165                 170                 175
Asp Asn Cys Val Glu Arg Phe Asp His His Cys Pro Trp Val Gly Asn
                180                 185                 190
Cys Val Gly Lys Arg Asn Tyr Arg Tyr Phe Tyr Leu Phe Ile Leu Ser
        195                 200                 205
Leu Ser Leu Leu Thr Ile Tyr Val Phe Ala Phe Asn Ile Val Tyr Val
    210                 215                 220
Ala Leu Lys Ser Leu Lys Ile Gly Phe Leu Glu Thr Leu Lys Glu Thr
225                 230                 235                 240
Pro Gly Thr Val Leu Glu Val Leu Ile Cys Phe Phe Thr Leu Trp Ser
                245                 250                 255
Val Val Gly Leu Thr Gly Phe His Thr Phe Leu Val Ala Leu Asn Gln
                260                 265                 270
Thr Thr Asn Glu Asp Ile Lys Gly Ser Trp Thr Gly Lys Asn Arg Val
        275                 280                 285
Gln Asn Pro Tyr Ser His Gly Asn Ile Val Lys Asn Cys Cys Glu Val
    290                 295                 300
Leu Cys Gly Pro Leu Pro Pro Ser Val Leu Asp Arg Arg Gly Ile Leu
305                 310                 315                 320
Pro Leu Glu Glu Ser Gly Ser Arg Pro Pro Ser Thr Gln Glu Thr Ser
                325                 330                 335
Ser Ser Leu Leu Pro Gln Ser Pro Ala Pro Thr Glu His Leu Asn Ser
```

```
            340                    345                    350
Asn Glu Met Pro Glu Asp Ser Ser Thr Pro Glu Glu Met Pro Pro Pro
         355                    360                    365
Glu Pro Pro Glu Pro Pro Gln Glu Ala Ala Glu Ala Glu Lys
     370                    375                    380
```

<210> 6055
<211> 2089
<212> DNA
<213> Homo sapiens

<400> 6055

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120

gcttacaata accagtcaaa cagattggct gtttcacgaa cagatggcac tgtggaaatt
180

tataacttgt cagcaaacta ctttcaggag aaatttttcc caggtcatga gtctcgggct
240

acagaagctt tgtgctgggc agaaggacag cgactcttta gtgctgggct caatggcgag
300

attatggagt atgatttaca ggcgttaaac atcaagtatg ctatggatgc ctttgggagga
360

cctatttgga gcatggctgc cagccccagt ggctctcaac ttttggttgg ttgtgaagat
420

ggatctgtga aactatttca aattacccca gacaaaatcc agtttgaaag aaattttgat
480

cggcagaaaa gtcgcatcct gagtctcagc tggcatccct ctggtaccca cattgcagct
540

ggttccatag actacattag tgtgtttgat gtcaaatcag gcagcgctgt tcataagatg
600

attgtggaca ggcagtatat gggcgtgtct aagcggaagt gcatcgtgtg gggtgtcgcc
660

ttcttgtccg atggcactat cataagtgtg gactctgctg ggaaggtgca gttctgggac
720

tcagccactg ggacgcttgt gaagagccat ctcatcgcta atgctgacgt gcagtccatt
780

gctgtagctg accaagaaga cagtttcgtg gtgggcacag cgagggaaca gtcttccatt
840

ttcagctggt ccctgtgaca tctaacagca gtgagaagca gtgggtgcgg acaaaaccgt
900

tccagcatca cactcatgac gtgcgcactg tggcccacag cccaacagcg ctgatatctg
960

gaggcactga cacccactta gtctttcgtc ctctcatgga gaaggtggaa gtaaagaatt
1020

acgatgccgc tctccgaaaa atcacctttc cccaccgatg tctcatctcc tgttctaaaa
1080

agaggcagct tctcctcttc cagtttgctc atcacttaga actttggcga ctgggatcca
1140

cagttgcaac aggcaagaat ggggatactc ttccactctc taaaaatgca gatcatttac
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tgcacctaaa gacaaagggt cctgagaaca ttatctgtag ctgtatctcc ccatgtggaa
1260
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tcacacacat cagttttcat cccaagagac cgatgcacat ccttctccat gatgcctaca
1860
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1920
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1980
ttggaaccta aaacagggca ctgtctgtgt ccttccttga actgtctacc ctgttgcttt
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2089
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<210> 6056
<211> 285
<212> PRT
<213> Homo sapiens

<400> 6056
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Ala Gly Met Gly Glu Phe Lys Ala His Arg Val Arg Phe Phe Asn Tyr
                20                  25                  30
Val Pro Ser Gly Ile Arg Cys Val Ala Tyr Asn Asn Gln Ser Asn Arg
            35                  40                  45
Leu Ala Val Ser Arg Thr Asp Gly Thr Val Glu Ile Tyr Asn Leu Ser
        50                  55                  60
Ala Asn Tyr Phe Gln Glu Lys Phe Phe Pro Gly His Glu Ser Arg Ala
65                  70                  75                  80
Thr Glu Ala Leu Cys Trp Ala Glu Gly Gln Arg Leu Phe Ser Ala Gly
                85                  90                  95
Leu Asn Gly Glu Ile Met Glu Tyr Asp Leu Gln Ala Leu Asn Ile Lys
                100                 105                 110
Tyr Ala Met Asp Ala Phe Gly Gly Pro Ile Trp Ser Met Ala Ala Ser
            115                 120                 125
Pro Ser Gly Ser Gln Leu Leu Val Gly Cys Glu Asp Gly Ser Val Lys
        130                 135                 140
Leu Phe Gln Ile Thr Pro Asp Lys Ile Gln Phe Glu Arg Asn Phe Asp
```

```
145                     150                     155                     160
Arg Gln Lys Ser Arg Ile Leu Ser Leu Ser Trp His Pro Ser Gly Thr
                    165                     170                     175
His Ile Ala Ala Gly Ser Ile Asp Tyr Ile Ser Val Phe Asp Val Lys
                180                     185                     190
Ser Gly Ser Ala Val His Lys Met Ile Val Asp Arg Gln Tyr Met Gly
            195                     200                     205
Val Ser Lys Arg Lys Cys Ile Val Trp Gly Val Ala Phe Leu Ser Asp
        210                     215                     220
Gly Thr Ile Ile Ser Val Asp Ser Ala Gly Lys Val Gln Phe Trp Asp
225                     230                     235                     240
Ser Ala Thr Gly Thr Leu Val Lys Ser His Leu Ile Ala Asn Ala Asp
                245                     250                     255
Val Gln Ser Ile Ala Val Ala Asp Gln Glu Asp Ser Phe Val Val Gly
            260                     265                     270
Thr Ala Arg Glu Gln Ser Ser Ile Phe Ser Trp Ser Leu
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<210> 6057
<211> 3924
<212> DNA
<213> Homo sapiens

<400> 6057
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120
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180
attaatgtgc aaatgaaaat aaagtagtta acagtcattc atttaataag cttgtgtatt
240
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300
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360
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420
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480
atttatcaaa ataagttttc tcacaagact cttttccatc aactctgaaa accctgatct
540
gacaacatac cccaataaag ctctggacaa gcacctccta aagcttggaa gaaaatgtgc
600
caagtctttt cctgtaacat ttactgcact acaaatggct aaagagcaat ttatggttta
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aaaggtgaat agtacaacag gtgagttcag gaaattgttt tagtgcactt tgctccagtt
720
ttagccaaca tgctacattt tcctttttgg tttttgtttt gttgttgttg tttttttgggg
780
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900
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gaaactttgc aaaacattac acaatttttt attattaaat gagaaaatct catttgttac
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1020
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2460
cgatgattta tgttttctgt accatttctt ccatgtgtac gccatccatt tttttctttc
2520
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2580

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2700

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2760

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3060

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3600

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3660

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3720

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3780

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<210> 6058
<211> 500
<212> PRT
<213> Homo sapiens

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<400> 6058
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Pro Ser Ser Thr Lys Val Leu Thr Ser Ser Leu Lys Ser Ser Leu Asn
            20                  25                  30
Phe Glu Lys His Ser Glu Asn Phe Ala Trp Thr Glu Asn Arg Tyr Asp
        35                  40                  45
Val Asn Arg Arg Arg His Asn Ser Ser Asp Gly Phe Asp Ser Ala Ile
    50                  55                  60
Gly Arg Pro Asn Gly Gly Asn Phe Gly Arg Lys Glu Lys Asn Gly Trp
65                  70                  75                  80
Arg Thr His Gly Arg Asn Gly Thr Glu Asn Ile Asn His Arg Gly Gly
                85                  90                  95
Tyr His Gly Gly Ser Ser Arg Ser Arg Ser Ser Ile Phe His Ala Gly
            100                 105                 110
Lys Ser Gln Gly Leu His Glu Asn Asn Ile Pro Asp Asn Glu Thr Gly
        115                 120                 125
Arg Lys Glu Asp Lys Arg Glu Arg Lys Gln Phe Glu Ala Glu Asp Phe
    130                 135                 140
Pro Ser Leu Asn Pro Glu Tyr Glu Arg Glu Pro Asn His Asn Lys Ser
145                 150                 155                 160
Leu Ala Ala Gly Val Trp Gly Leu His Ala Gln Thr His Thr Tyr Pro
                165                 170                 175
Thr Lys Lys Ile Ser Gln Ala Pro Leu Leu Glu Tyr Pro Pro Asn Pro
            180                 185                 190
Lys Ser Arg Ala Pro Arg Met Leu Val Ile Lys Lys Gly Lys Asn Thr Lys
        195                 200                 205
Asp Leu Gln Leu Ser Gly Phe Pro Val Val Gly Asn Leu Pro Ser Gln
    210                 215                 220
Pro Val Lys Asn Gly Thr Gly Pro Ser Val Tyr Lys Gly Leu Val Pro
225                 230                 235                 240
Lys Pro Ala Ala Pro Pro Thr Lys Pro Thr Gln Trp Lys Ser Gln Thr
                245                 250                 255
Lys Glu Asn Lys Val Gly Thr Ser Phe Pro His Glu Ser Thr Phe Gly
            260                 265                 270
Val Gly Asn Phe Asn Ala Phe Lys Ser Thr Ala Lys Asn Phe Ser Pro
        275                 280                 285
Ser Thr Asn Ser Val Lys Glu Cys Asn Arg Ser Asn Ser Ser Ser Pro
    290                 295                 300
Val Asp Lys Leu Asn Gln Gln Pro Arg Leu Thr Lys Leu Thr Arg Met
305                 310                 315                 320
Arg Thr Asp Lys Lys Ser Glu Phe Leu Lys Ala Leu Lys Arg Asp Arg
                325                 330                 335
Val Glu Glu Glu His Glu Asp Glu Ser Arg Ala Gly Ser Glu Lys Asp
            340                 345                 350
Asp Asp Ser Phe Asn Leu His Asn Ser Asn Ser Thr His Gln Glu Arg
        355                 360                 365
Asp Ile Asn Arg Asn Phe Asp Glu Asn Glu Ile Pro Gln Glu Asn Gly
    370                 375                 380
Asn Ala Ser Val Ile Ser Gln Gln Ile Ile Arg Ser Ser Thr Phe Pro
385                 390                 395                 400
Gln Thr Asp Val Leu Ser Ser Ser Leu Glu Ala Glu His Arg Leu Leu
                405                 410                 415
Lys Glu Met Gly Trp Gln Glu Asp Ser Glu Asn Asp Glu Thr Cys Ala
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            420                   425                    430
Pro Leu Thr Glu Asp Glu Met Arg Glu Phe Gln Val Ile Ser Glu Gln
        435                   440                    445
Leu Gln Lys Asn Gly Leu Arg Lys Asn Gly Ile Leu Lys Asn Gly Leu
        450                   455                    460
Ile Cys Asp Phe Lys Phe Gly Pro Trp Lys Asn Ser Thr Phe Lys Pro
465                   470                    475                    480
Thr Thr Glu Asn Asp Asp Thr Glu Thr Ser Ser Ser Asp Thr Ser Asp
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Asp Asp Asp Val
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<210> 6059
<211> 1442
<212> DNA
<213> Homo sapiens

<400> 6059
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120
ttaagcttaa acataaccat attatacttt acaagggctt tatccacttg actgtaaatt
180
gtatttgatg ctgagctatt cattaaattt aattcagctc cagtaagagt attcaataaa
240
caaacattga ttgctttcct atcttacatt tttttaggag tgcgaaataa gtgagtcatc
300
atgaattggg aaaatgagag ctccccaaaa gagtttatac tacttggctt ctcagatagg
360
gcttggctac aaatgcccct ttttgtggtc ctgttaatat catacacaat caccatattt
420
ggcaatgtgt ccatcatgat ggtgtgcatt ctggatccca aacttcatc tcccatgtat
480
ttctttctca ctaatctctc catcttagat ctctgctata ccacaactac agtccctcat
540
atgttggtaa atattggttg caacaaaaag accatcagct atgctggctg tgtggcccac
600
ctcatcatct tcctggccct aggtgctaca gagtgtctcc ttctggctgt tatgtccttt
660
gacagagatg tggctgtttg cagacccctc cactatgtag tcatcatgaa ttattggttc
720
tgcctaagga tggcagcctt ctcatggctc attggtttcg gcaactcagt gctgcagtct
780
tccttgactc ttaacatgcc acgctgtggt caccaggaag tggaccactt tttctgtgag
840
gtgcctgcac ttctcaagtt gtcatgtgct gacacaaagc ctattgaggc tgagctcttc
900
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960
atagctcaag cagtattaaa aatcaggtca gcagaaggac ggcaaaaagc atttgggaca
1020
tgtgggtccc acatgattgt ggtgtccctc ttttatggaa cagccattta tatgtatctt
1080
```

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caaccacctt catccacctc taaggactgg ggaaagatgg tttccctctt ctatggaatc
1140
atcacatcca tgttgaactc cctcatctac agccttagaa ataaagatat gaaggaggcc
1200
ttcaagaggc tgatgccaag aatctttttc tgtaagaaat aagaagtact ccattgtgat
1260
gagaatcttc ttagtctttc cttatcttca atgatggtaa tgacctttga actcattttc
1320
ctattttcca ggctctggtg atttcactaa attctgtcaa caattagaaa atccttcctc
1380
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1440
gc
1442


<210> 6060
<211> 313
<212> PRT
<213> Homo sapiens

<400> 6060
Met Asn Trp Glu Asn Glu Ser Ser Pro Lys Glu Phe Ile Leu Leu Gly
1               5                   10                  15
Phe Ser Asp Arg Ala Trp Leu Gln Met Pro Leu Phe Val Val Leu Leu
            20                  25                  30
Ile Ser Tyr Thr Ile Thr Ile Phe Gly Asn Val Ser Ile Met Met Val
        35                  40                  45
Cys Ile Leu Asp Pro Lys Leu His Thr Pro Met Tyr Phe Phe Leu Thr
    50                  55                  60
Asn Leu Ser Ile Leu Asp Leu Cys Tyr Thr Thr Thr Thr Val Pro His
65                  70                  75                  80
Met Leu Val Asn Ile Gly Cys Asn Lys Lys Thr Ile Ser Tyr Ala Gly
                85                  90                  95
Cys Val Ala His Leu Ile Ile Phe Leu Ala Leu Gly Ala Thr Glu Cys
            100                 105                 110
Leu Leu Leu Ala Val Met Ser Phe Asp Arg Tyr Val Ala Val Cys Arg
        115                 120                 125
Pro Leu His Tyr Val Val Ile Met Asn Tyr Trp Phe Cys Leu Arg Met
    130                 135                 140
Ala Ala Phe Ser Trp Leu Ile Gly Phe Gly Asn Ser Val Leu Gln Ser
145                 150                 155                 160
Ser Leu Thr Leu Asn Met Pro Arg Cys Gly His Gln Glu Val Ala His
                165                 170                 175
Phe Phe Cys Glu Val Pro Ala Leu Leu Lys Leu Ser Cys Ala Asp Thr
            180                 185                 190
Lys Pro Ile Glu Ala Glu Leu Phe Phe Phe Ser Val Leu Ile Leu Leu
        195                 200                 205
Ile Pro Val Thr Leu Ile Leu Ile Ser Tyr Gly Phe Ile Ala Gln Ala
    210                 215                 220
Val Leu Lys Ile Arg Ser Ala Glu Gly Arg Gln Lys Ala Phe Gly Thr
225                 230                 235                 240
Cys Gly Ser His Met Ile Val Val Ser Leu Phe Tyr Gly Thr Ala Ile
                245                 250                 255
Tyr Met Tyr Leu Gln Pro Pro Ser Ser Thr Ser Lys Asp Trp Gly Lys
```

```
                260              265              270
Met Val Ser Leu Phe Tyr Gly Ile Ile Thr Ser Met Leu Asn Ser Leu
                275              280              285
Ile Tyr Ser Leu Arg Asn Lys Asp Met Lys Glu Ala Phe Lys Arg Leu
           290              295              300
Met Pro Arg Ile Phe Phe Cys Lys Lys
305                   310
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<210> 6061
<211> 1582
<212> DNA
<213> Homo sapiens

<400> 6061

nggcaggccc gcgcccgcgc ccggactttg ccatcggcgg ggcagtcgcg ggatgcgccc
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120
ccatcctctt ccccaatttg ccacttccag cagctttagc ccatggaggg gatgtgaccg
180
ggactgagtc aggagccctc tggaagcatg gagactgtgg tgattgttgc cataggtgtg
240
ctggccacca tctttctggc ttcgtttgca gccttggtgc tggtttgcag gcagcgctac
300
tgccggccgc gagacctgct gcagcgctat gattctaagc ccattgtgga cctcattggt
360
gccatggaga cccagtctga gccctctgag ttagaactgg acgatgtcgt tatcaccaac
420
ccccacattg aggccattct ggagaatgaa gactggatcg aagatgcctc gggtctcatg
480
tcccactgca ttgccatctt gaagatttgt cacactctga cagagaagct tgttgccatg
540
acaatgggct ctggggccaa gatgaagact tcagccagtg tcagcgacat cattgtggtg
600
gccaagcgga tcagccccag ggtggatgat gttgtgaagt cgatgtaccc tccgttggac
660
cccaaactcc tggacgcacg gacgactgcc ctgctccgt ctgtcagtca cctggtgctg
720
gtgacaagga atgcctgcca tctgacggga ggcctggact ggattgacca gtctctgtcg
780
gctgctgagg agcatttgga agtccttcga gaagcagccc tagcttctga gccagataaa
840
ggcctcccag gccctgaagg cttcctgcag gagcagtctg caatttagtg cctacaggcc
900
agcagctagc catgaaggcc cctgccgcca tccctggatg gctcagctta gccttctact
960
ttttcctata gagttagttg ttctccacgg ctggagagtt cagctgtgtg tgcatagtaa
1020
agcaggagat ccccgtcagt ttatgcctct tttgcagttg caaactgtgg ctggtgagtg
1080
gcagtctaat actacagtta ggggagatgc cattcactct ctgcaagagg agtattgaaa
1140
actggtggac tgtcagcttt atttagctca cctagtgttt tcaagaaaat tgagccaccg
1200

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tctaagaaat caagaggttt cacattaaaa ttagaatttc tggcctctct cgatcggtca
1260
gaatgtgtgg caattctgat ctgcattttc agaagaggac aatcaattga aactaagtag
1320
gggtttcttc ttttggcaag acttgtactc tctcacctgg cctgtttcat ttatttgtat
1380
tatctgcctg gtccctgagg cgtctgggtc tctcctctcc cttgcaggtt tgggtttgaa
1440
gctgaggaac tacaaagttg atgatttctt ttttatcttt atgcctgcaa ttttacctag
1500
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1560
agttcctcag cttcagtcga cg
1582
```

<210> 6062
<211> 226
<212> PRT
<213> Homo sapiens

<400> 6062

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Met Glu Thr Val Val Ile Val Ala Ile Gly Val Leu Ala Thr Ile Phe
1               5                   10                  15
Leu Ala Ser Phe Ala Ala Leu Val Leu Val Cys Arg Gln Arg Tyr Cys
                20                  25                  30
Arg Pro Arg Asp Leu Leu Gln Arg Tyr Asp Ser Lys Pro Ile Val Asp
        35                  40                  45
Leu Ile Gly Ala Met Glu Thr Gln Ser Glu Pro Ser Glu Leu Glu Leu
    50                  55                  60
Asp Asp Val Val Ile Thr Asn Pro His Ile Glu Ala Ile Leu Glu Asn
65                  70                  75                  80
Glu Asp Trp Ile Glu Asp Ala Ser Gly Leu Met Ser His Cys Ile Ala
                85                  90                  95
Ile Leu Lys Ile Cys His Thr Leu Thr Glu Lys Leu Val Ala Met Thr
                100                 105                 110
Met Gly Ser Gly Ala Lys Met Lys Thr Ser Ala Ser Val Ser Asp Ile
        115                 120                 125
Ile Val Val Ala Lys Arg Ile Ser Pro Arg Val Asp Asp Val Val Lys
    130                 135                 140
Ser Met Tyr Pro Pro Leu Asp Pro Lys Leu Leu Asp Ala Arg Thr Thr
145                 150                 155                 160
Ala Leu Leu Leu Ser Val Ser His Leu Leu Val Thr Arg Arg Asn Ala
                165                 170                 175
Cys His Leu Thr Gly Gly Leu Asp Trp Ile Asp Gln Ser Leu Ser Ala
                180                 185                 190
Ala Glu Glu His Leu Glu Val Leu Arg Glu Ala Ala Leu Ala Ser Glu
        195                 200                 205
Pro Asp Lys Gly Leu Pro Gly Pro Glu Gly Phe Leu Gln Glu Gln Ser
    210                 215                 220
Ala Ile
225
```

<210> 6063
<211> 2286

<212> DNA
<213> Homo sapiens

<400> 6063
nnacgcgtga agggtgcggg gtgcagttgc ggctccaggg ccatggcgga ggagcagggc
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120
ggcggcgctg agcggctggt gttggacgcg gcgctggcgc tgcaggcgcg cgggtgtagc
180
gtgaagatct ggacagcgca ctacgacccg ggccactgtt tcgccgagag ccgcgagcta
240
ccggtgcgct gtgccgggga ctggctgccg cgaggcctgg gctggggcgg ccgcggcgcc
300
gccgtctgcg cctacgtgcg catggttttc ctggcgctct acgtgctgtt cctcgccgac
360
gaggagttcg acgtggtagt gtgcgaccag gtgtctgcct gtatccagt gttcaggctg
420
gctagacggc ggaagaagat cctattttac tgtcacttcc cagatctgct tctcaccaag
480
agagattctt ttctaaacg actatacagg gccccaattg actggataga ggaatacacc
540
acaggcatgg cagactgcat cttagtcaac agccagttca cagctgctgt ttttaaggaa
600
acattcaagt ccctgtctca catagaccct gatgtcctct atccatctct aaatgtcacc
660
agctttgact cagttgttcc tgaannaagc tggatgacct agtccccaag gggaaaaaaa
720
ttcctgctgc tctccatcaa cagatacgaa aggaagaaaa atctgacttt ggcactggaa
780
gccctagtac agctgcgtgg aagattgaca tcccaagatt gggagagagt tcatctgatc
840
gtggcaggtg gttatgacga gagagtcctg gagaatgtgg aacattatca ggaattgaag
900
aaaatggtcc aacagtccga ccttggccag tatgtgacct tcttgaggtc tttctcagac
960
aaacagaaaa tctccctcct ccacagctgc acgtgtgtgc tttacacacc aagcaatgag
1020
cactttggca ttgtccctct ggaagccatg tacatgcagt gcccagtcat tgctgttaat
1080
tcgggtggac ccttggagtc cattgaccac agtgtcacag ggtttctgtg tgagcctgac
1140
ccggtgcact tctcagaagc aatagaaaag ttcatccgtg aaccttcctt aaaagccacc
1200
atgggcctgg ctggaagagc cagagtgaag gaaaaatttt ccctgaagc atttacagaa
1260
cagctctacc gatatgttac caaactgctg gtataatcag attgttttta agatctccat
1320
taatgtcatt tttatggatt gtagaccag ttttgaaacc aaaaaagaaa cctagaatct
1380
aatgcagaag agatctttta aaaaataaac ttgagtcttg aatgtgagcc actttcctat
1440
ataccacacc tccctgtcca cttttcagaa aaaccatgtc ttttatgcta taatcattcc
1500

```
aaatttttgcc agtgttaagt tacaaatgtg gtgtcattcc atgttcagca gagtatttta
1560
attatatttt ctcgggatta ttgctcttct gtctataaat tttgaatgat actgtgcctt
1620
aattggtttt catagtttaa gtgtgtatca ttatcaaagt tgattaattt ggcttcatag
1680
tataatgaga gcagggctat tgtagttccc agattcaatc caccgaagtg ttcactgtca
1740
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1800
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1860
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1920
ggatatgaca accaaactgg aaatcagaac actagggtaa agtggatatt gaaatgaagc
1980
aagaatattg tcacacatgt gttgtgcatc ttgtttaggg tatatttctt aatgtcatct
2040
aggtcattag ttttgttaat atttgtgttg tcttgaccaa gctcctacta agtataggac
2100
acaaatgttt tttatcttcc aaggcctggc tcaaatgcca ctgctgcaaa gctttctttg
2160
accctctggc cacctcccaa gccagaagtt atcttccccc tccatgtact ctagcctttt
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2280
acagca
2286


<210> 6064
<211> 233
<212> PRT
<213> Homo sapiens

<400> 6064
Xaa Arg Val Lys Gly Ala Gly Cys Ser Cys Gly Ser Arg Ala Met Ala
1               5                   10                  15
Glu Glu Gln Gly Arg Glu Arg Asp Ser Val Pro Lys Pro Ser Val Leu
            20                  25                  30
Phe Leu His Pro Asp Leu Gly Val Gly Gly Ala Glu Arg Leu Val Leu
        35                  40                  45
Asp Ala Ala Leu Ala Leu Gln Ala Arg Gly Cys Ser Val Lys Ile Trp
    50                  55                  60
Thr Ala His Tyr Asp Pro Gly His Cys Phe Ala Glu Ser Arg Glu Leu
65                  70                  75                  80
Pro Val Arg Cys Ala Gly Asp Trp Leu Pro Arg Gly Leu Gly Trp Gly
                85                  90                  95
Gly Arg Gly Ala Ala Val Cys Ala Tyr Val Arg Met Val Phe Leu Ala
            100                 105                 110
Leu Tyr Val Leu Phe Leu Ala Asp Glu Glu Phe Asp Val Val Val Cys
        115                 120                 125
Asp Gln Val Ser Ala Cys Ile Pro Val Phe Arg Leu Ala Arg Arg Arg
    130                 135                 140
Lys Lys Ile Leu Phe Tyr Cys His Phe Pro Asp Leu Leu Leu Thr Lys
```

```
145                   150                   155                   160
Arg Asp Ser Phe Leu Lys Arg Leu Tyr Arg Ala Pro Ile Asp Trp Ile
                  165                   170                   175
Glu Glu Tyr Thr Thr Gly Met Ala Asp Cys Ile Leu Val Asn Ser Gln
              180                   185                   190
Phe Thr Ala Ala Val Phe Lys Glu Thr Phe Lys Ser Leu Ser His Ile
          195                   200                   205
Asp Pro Asp Val Leu Tyr Pro Ser Leu Asn Val Thr Ser Phe Asp Ser
      210                   215                   220
Val Val Pro Glu Xaa Ser Trp Met Thr
225                   230
```

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<210> 6065
<211> 2084
<212> DNA
<213> Homo sapiens

<400> 6065
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gccatcagag agtcagcaaa ggtagttgac caagctcaaa ggagagtgtt gaggggagtt
120
gatgaccttg acttttcat aggagatgaa gccatcgata aacctacata tgctacaaag
180
tggccgattc gacatggaat cattgaagac tgggatctta tggaaaggtt catggagcaa
240
gtggtttta aatatcttcg agctgaacct gaggaccatt attttttaat ggggtaacta
300
tctccttcct gctgtaatca gtggccacca gaacctcccc ctccaacccc cgaaaacaga
360
gagtatcttg cagaaattat gtttgaatca tttaacgtac caggactcta cattgcagtt
420
caggcagtgc tggccttggc ggcatcttgg acatctcgac aagtgggtga acgtacgtta
480
acggggatag tcattgacag cggagatgga gtcacccatg ttatcccagt ggcagaaggt
540
tatgtaattg gaagctgcat caaacacatc ccgattgcag gtagagatat tacgtatttc
600
attcaacagc tgctaaggga gagggaggtg ggaatccctc ctgagcagtc actggagacc
660
gcaaaagcca ttaaggagaa atactgttac atttgccccg atatagtcaa ggaatttgcc
720
aagtatgatg tggatccccg gaagtggatc aaacagtaca cgggtatcaa tgcgatcaac
780
cagaagaagt ttgttataga cgttggttac gaaagattcc tgggacctga aatattcttt
840
cacccggagt ttgccaaccc agactttatg gagtccatct cagatgttgt tgatgaagta
900
atacagaact gcccccatcga tgtgcggcgc ccgctgtata agaatgtcgt actctcagga
960
ggctccacca tgttcaggga tttcggacgc cgactgcaga gggatttgaa gagagtggtg
1020
gatgctaggc tgaggctcag cgaggagctc agcggcggga ggatcaagcc gaagcctgtg
1080
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gaggtccagg tggtcacgca tcacatgcag cgctacgccg tgtggttcgg aggctccatg
1140
ctggcctcga ctcccgagtt ctttcaggtc tgccacacca agaaggacta tgaagagtac
1200
gggcccagca tctgcgcgcca caaccccgtc tttggagtca tgtcctagtg tctgcctgaa
1260
cgcgtcgttc gatggtgtca cgttggggaa caagtgtcct tcagaaccca gagaaggccg
1320
ccgttctgta aatagcgacg tcggtgttgc tgcccagcag cgtgcttgca ttgccggtgc
1380
atgaggcgcg gcgcgggccc ttcagtaaaa gccatttatc cgtgtgccga ccgctgtctg
1440
ccagcctcct ccttctcccg ccctcctcac cctcgctctc cctcctcctc ctcctccgag
1500
ctgctagctg acaaatacaa ttctgaagga atccaaatgt gactttgaaa attgttagag
1560
aaaacaacat tagaaaatgg cgcaaaatcg ttaggtccca ggagagaatg tgggggcgca
1620
aaccctttc ctcccagcct attttgtaa ataaaatgtt taaacttgaa atacaaatcg
1680
atgtttatat ttcctatcat tttgtatttt atggtatttg gtacaactgg ctgatactaa
1740
gcacgaatag atattgatgt tatggagtgc tgtaatccaa agtttttaat tgtgaggcat
1800
gttctgatat gtttataggc aaacaaataa aacagcaaac tttttgcca catgtttgct
1860
agaaaatgat tatactttat tggagtgaca tgaagtttga acactaaaca gtaatgtatg
1920
agaattacta cagatacatg tatctttag tttttttgt ttgaactttc tggagctgtt
1980
ttatagaaga tgatggtttg ttgtcggtga gtgttggatg aaatacttcc ttgcaccatt
2040
gtaataaaag ctgttagaat atttgtaaat atcaaaaaaa aaaa
2084

<210> 6066
<211> 80
<212> PRT
<213> Homo sapiens

<400> 6066
Gly Ile Ala Ile Arg Glu Ser Ala Lys Val Val Asp Gln Ala Gln Arg
 1   5   10   15
Arg Val Leu Arg Gly Val Asp Asp Leu Asp Phe Phe Ile Gly Asp Glu
             20   25   30
Ala Ile Asp Lys Pro Thr Tyr Ala Thr Lys Trp Pro Ile Arg His Gly
         35   40   45
Ile Ile Glu Asp Trp Asp Leu Met Glu Arg Phe Met Glu Gln Val Val
     50   55   60
Phe Lys Tyr Leu Arg Ala Glu Pro Glu Asp His Tyr Phe Leu Met Gly
65   70   75   80

<210> 6067
<211> 406

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<212> DNA
<213> Homo sapiens

<400> 6067
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tccctgagct gactgcaccc ctcttcctgg gtagcggtgg cctccccaca gcactgtgtg
120
aatatgctgg gcatggggcg gctcgggcca ctgctccctg gccaaacgga agccctggag
180
ggcatggcca gtgcctggga catgcagggg gctcactgga acgactagcg gtcctcatcc
240
tcctagaact tacattccca gagagaaaga gactcctggg aattataaga gtggagaaag
300
gactataata atcgcaacag ctaacactct tccagctaac actgcatgct gggcactgtc
360
ccgagtacat gaccaccctc acaatactcc tgcagagcgc acgcgt
406


<210> 6068
<211> 117
<212> PRT
<213> Homo sapiens

<400> 6068
Met Tyr Ser Gly Gln Cys Pro Ala Cys Ser Val Ser Trp Lys Ser Val
1               5                   10                  15
Ser Cys Cys Asp Tyr Tyr Ser Pro Phe Ser Thr Leu Ile Ile Pro Arg
                20                  25                  30
Ser Leu Phe Leu Ser Gly Asn Val Ser Ser Arg Arg Met Arg Thr Ala
            35                  40                  45
Ser Arg Ser Ser Glu Pro Pro Ala Cys Pro Arg His Trp Pro Cys Pro
        50                  55                  60
Pro Gly Leu Pro Phe Gly Gln Gly Ala Val Ala Arg Ala Ala Pro Cys
65                  70                  75                  80
Pro Ala Tyr Ser His Ser Ala Val Gly Arg Pro Pro Leu Pro Arg Lys
                85                  90                  95
Arg Gly Ala Val Ser Ser Gly Arg Leu His Arg Arg Gly Thr Gly Ala
                100                 105                 110
Met Trp Trp Glu Gly
            115


<210> 6069
<211> 456
<212> DNA
<213> Homo sapiens

<400> 6069
ngggaaggcc taaaaaatgt cattttacc aactgtgtaa aggatgaaaa tgtcaagcag
60
atcatccga tggtcactga actgattggg agaagccacc gctaccaccg aaaagagaac
120
ctggagtact gtatcatggt cattggggtc cccaacgtgg gcaagtcctc cctcatcaac
180
```

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tccctccgga ggcagcacct caggaaaggg aaagccacca gggtgggtgg cgagcctggg
240
atcaccagag ctgtgatgtc caaaattcag gtggagtcct caggggccag gcccagcact
300
ctgtcaagag ctctgcaggc gtctggcacc tgccgacctc tgtgtggctt ccggctgctg
360
accacgcttc cctcccctcc actcagtgtc cccgctgagc accccgggg caggcactgc
420
cctgccctta ttccacagtc gtcatagtct ttgcgc
456
```

```
<210> 6070
<211> 148
<212> PRT
<213> Homo sapiens
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```
<400> 6070
Xaa Glu Gly Leu Lys Asn Val Ile Phe Thr Asn Cys Val Lys Asp Glu
1               5                   10                  15
Asn Val Lys Gln Ile Ile Pro Met Val Thr Glu Leu Ile Gly Arg Ser
            20                  25                  30
His Arg Tyr His Arg Lys Glu Asn Leu Glu Tyr Cys Ile Met Val Ile
        35                  40                  45
Gly Val Pro Asn Val Gly Lys Ser Ser Leu Ile Asn Ser Leu Arg Arg
    50                  55                  60
Gln His Leu Arg Lys Gly Lys Ala Thr Arg Val Gly Gly Glu Pro Gly
65                  70                  75                  80
Ile Thr Arg Ala Val Met Ser Lys Ile Gln Val Glu Ser Ser Gly Ala
                85                  90                  95
Arg Pro Ser Thr Leu Ser Arg Ala Leu Gln Ala Ser Gly Thr Cys Arg
            100                 105                 110
Pro Leu Cys Gly Phe Arg Leu Leu Thr Thr Leu Pro Ser Pro Pro Leu
        115                 120                 125
Ser Val Pro Ala Glu His Pro Arg Gly Arg His Cys Pro Ala Leu Ile
    130                 135                 140
Pro Gln Ser Ser
145
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```
<210> 6071
<211> 2633
<212> DNA
<213> Homo sapiens
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<400> 6071
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tgagaattct ccactttacc aatacttaca ggatctggga cacacagact ttgaaatatg
120
ttcttctttg tcaccaaaaa cagaaaaatg cacaacagag ggacaacaaa agcctcctac
180
aagagtccta ccaaaatacc tgggatatag taatcactca atgaatataa actgcactta
240
ctggcatgct caaggaatgg gctattaagc aaggtatcct gttaaaagtg gctgaaacca
300
```

tcaaaagttg gattttttt tctcagtgca ataagaaaga tgacttactt cacaagttgg
360
atattggatt ccgactcgac tcattacata ccatcctgca acaggaagtc ctgttacaag
420
aggatgtgga gctgattgag ctacttgatc ccagtatcct gtctgcaggg caatctcaac
480
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540
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1920

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<210> 6072
<211> 76
<212> PRT
<213> Homo sapiens

<400> 6072
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            20                  25                  30
Pro Thr Trp Arg Asn Pro Ile Ser Thr Lys Asn Thr Lys Ile Asn Lys
        35                  40                  45
Ala Trp Trp Arg Val Pro Val Val Pro Ala Thr Arg Glu Ala Glu Ala
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Gly Glu Ser Leu Glu Pro Gly Arg Arg Arg Phe Gln
65                  70                  75


<210> 6073
<211> 387
<212> DNA
<213> Homo sapiens

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180
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<210> 6074
<211> 69
<212> PRT
<213> Homo sapiens

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                20                  25                  30
Ala Pro Thr Gly Pro Phe Ser Pro Arg Met Lys Pro Ala Gly Ser Val
        35                  40                  45
Asn Asp Met Ala Leu Asp Ala Phe Asp Leu Asp Arg Met Lys Gln Glu
    50                  55                  60
Ile Leu Glu Glu Val
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<210> 6075
<211> 4668
<212> DNA
<213> Homo sapiens

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240
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420
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660
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2280
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<210> 6076
<211> 601
<212> PRT
<213> Homo sapiens

<400> 6076
Met Ala Gln Lys Lys Tyr Leu Gln Ala Lys Leu Thr Gln Phe Leu Arg
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            20                  25                  30
Glu Val Gly Leu Ala Leu Lys Asp Leu Ala Lys Gln Tyr Ser Asp Arg
        35                  40                  45
Leu Glu Cys Cys Glu Asn Glu Val Glu Lys Val Ile Glu Glu Ile Arg
    50                  55                  60
Cys Lys Ala Ile Glu Arg Gly Thr Gly Asn Asp Asn Tyr Arg Thr Thr
65                  70                  75                  80
Gly Ile Ala Thr Ile Glu Val Phe Leu Pro Pro Arg Leu Lys Lys Asp
                85                  90                  95
Arg Lys Asn Leu Leu Glu Thr Arg Leu His Ile Thr Gly Arg Glu Leu
            100                 105                 110
Arg Ser Lys Ile Ala Glu Thr Phe Gly Leu Gln Glu Asn Tyr Ile Lys
        115                 120                 125
Ile Val Ile Asn Lys Lys Gln Leu Gln Leu Gly Lys Thr Leu Glu Glu
    130                 135                 140
Gln Gly Val Ala His Asn Val Lys Ala Met Val Leu Glu Leu Lys Gln
145                 150                 155                 160
Ser Glu Glu Asp Ala Arg Lys Asn Phe Gln Leu Glu Glu Glu Glu Gln
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                    165                    170                    175
Asn Glu Ala Lys Leu Lys Glu Lys Gln Ile Gln Arg Thr Lys Arg Gly
          180                    185                    190
Leu Glu Ile Leu Ala Lys Arg Ala Ala Glu Thr Val Val Asp Pro Glu
     195                    200                    205
Met Thr Pro Tyr Leu Asp Ile Ala Asn Gln Thr Gly Arg Ser Ile Arg
     210                    215                    220
Ile Pro Pro Ser Glu Arg Lys Ala Leu Met Leu Ala Met Gly Tyr His
225                    230                    235                    240
Glu Lys Gly Arg Ala Phe Leu Lys Arg Lys Glu Tyr Gly Ile Ala Leu
                    245                    250                    255
Pro Cys Leu Leu Asp Ala Asp Lys Tyr Phe Cys Glu Cys Cys Arg Glu
               260                    265                    270
Leu Leu Asp Thr Val Asp Asn Tyr Ala Val Leu Gln Leu Asp Ile Val
          275                    280                    285
Trp Cys Tyr Phe Arg Leu Glu Gln Leu Glu Cys Leu Asp Asp Ala Glu
     290                    295                    300
Lys Lys Leu Asn Leu Ala Gln Lys Cys Phe Lys Asn Cys Tyr Gly Glu
305                    310                    315                    320
Asn His Gln Arg Leu Val His Ile Lys Gly Asn Cys Gly Lys Glu Lys
               325                    330                    335
Val Leu Phe Leu Arg Leu Tyr Leu Leu Gln Gly Ile Arg Asn Tyr His
               340                    345                    350
Ser Gly Asn Asp Val Glu Ala Tyr Glu Tyr Leu Asn Arg His Val Ser
          355                    360                    365
Ser Leu Lys Ser Tyr Ile Leu Ile His Gln Lys Trp Thr Ile Cys Cys
     370                    375                    380
Ser Trp Gly Leu Leu Pro Arg Lys Xaa Arg Leu Gly Leu Arg Ala Cys
385                    390                    395                    400
Asp Gly Asn Val Asp His Ala Ala Thr His Ile Thr Asn Arg Arg Glu
               405                    410                    415
Glu Leu Ala Gln Ile Arg Lys Glu Glu Lys Glu Lys Lys Arg Arg Arg
          420                    425                    430
Leu Glu Asn Ile Arg Phe Leu Lys Gly Met Gly Tyr Ser Thr His Ala
          435                    440                    445
Ala Gln Gln Ile Leu Leu Ser Asn Pro Gln Met Trp Trp Leu Asn Asp
     450                    455                    460
Ser Asn Pro Glu Thr Asp Asn Arg Gln Glu Ser Pro Ser Gln Glu Asn
465                    470                    475                    480
Ile Asp Arg Leu Val Tyr Met Gly Phe Asp Ala Leu Val Ala Gln Ala
               485                    490                    495
Ala Leu Arg Val Phe Arg Gly Asn Val Gln Leu Ala Ala Gln Thr Leu
          500                    505                    510
Ala His Asn Gly Gly Ser Leu Pro Pro Glu Leu Pro Leu Ser Pro Glu
          515                    520                    525
Asp Ser Leu Ser Pro Pro Ala Thr Ser Pro Ser Asp Ser Ala Gly Thr
     530                    535                    540
Ser Ser Ala Ser Thr Asp Glu Asp Met Glu Thr Glu Ala Val Asn Glu
545                    550                    555                    560
Ile Leu Glu Asp Ile Pro Glu His Glu Glu Asp Tyr Leu Asp Ser Thr
               565                    570                    575
Leu Glu Asp Glu Glu Ile Ile Ile Ala Glu Tyr Leu Ser Tyr Val Glu
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<210> 6077
<211> 2093
<212> DNA
<213> Homo sapiens

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1380
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<210> 6078
<211> 213
<212> PRT
<213> Homo sapiens

<400> 6078

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            20                  25                  30
Ser Gly Arg Glu Gly Ala Ser Gly Pro Gly Val Gly Pro His Ile Tyr
        35                  40                  45
Val Arg Glu Ala Glu Asp Arg Glu Leu Val Thr Met Ala Gly Pro Gln
    50                  55                  60
Pro Leu Ala Leu Gln Leu Glu Gln Leu Leu Asn Pro Arg Pro Ser Glu
65                  70                  75                  80
Ala Asp Pro Glu Glu Ala Asp Pro Glu Glu Ala Thr Ala Ala Arg Val Ile
                85                  90                  95
Asp Arg Phe Asp Glu Gly Glu Asp Gly Glu Gly Asp Phe Leu Val Val
            100                 105                 110
Gly Ser Ile Arg Lys Leu Ala Ser Ala Ser Leu Leu Asp Thr Asp Lys
        115                 120                 125
Arg Tyr Cys Gly Lys Thr Thr Ser Arg Lys Ala Trp Asn Glu Asp His
    130                 135                 140
Trp Glu Gln Thr Leu Pro Gly Ser Ser Asp Glu Glu Ile Ser Asp Glu
145                 150                 155                 160
Glu Gly Ser Gly Asp Glu Asp Ser Glu Gly Leu Gly Leu Glu Glu Tyr
                165                 170                 175
Asp Glu Asp Asp Leu Gly Ala Ala Glu Glu Gln Glu Cys Gly Asp Gln
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Cys Pro Glu Tyr Gln
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<210> 6079
<211> 651
<212> DNA
<213> Homo sapiens

<400> 6079
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gacatatttc ctgtcaccaa caaagatttc agggattttg tcagggagaa aaagtatcgg
420
acagaagctg agatgtttgg atggagcttt gtctttgagg actttgtctc tgatgagctg
480
agaaacaaag ccacccagcc aatgaagtct gtactctggt ggcttccagt ggaaaaggca
540
ttttggaggc agcctgcagg tcctggctct ggcatccgag agagactgga gcacccagtg
600
ttacgtga gctggaatga cgccgtgcc tactgtgctt ggcggggaaa a
651


<210> 6080
<211> 162
<212> PRT
<213> Homo sapiens

<400> 6080
Leu Met Ala Arg His Gly Leu Pro Leu Leu Pro Leu Leu Ser Leu Leu
 1               5                  10                  15
Val Gly Ala Trp Leu Lys Leu Gly Asn Gly Gln Ala Thr Ser Met Val
                20                  25                  30
Gln Leu Gln Gly Gly Arg Phe Leu Met Gly Thr Asn Ser Pro Asp Ser
            35                  40                  45
Arg Asp Gly Glu Gly Pro Val Arg Glu Ala Thr Val Lys Pro Phe Ala
        50                  55                  60
Ile Asp Ile Phe Pro Val Thr Asn Lys Asp Phe Arg Asp Phe Val Arg
65                  70                  75                  80
Glu Lys Lys Tyr Arg Thr Glu Ala Glu Met Phe Gly Trp Ser Phe Val
                85                  90                  95
Phe Glu Asp Phe Val Ser Asp Glu Leu Arg Asn Lys Ala Thr Gln Pro
```

```
              100              105              110
Met Lys Ser Val Leu Trp Trp Leu Pro Val Glu Lys Ala Phe Trp Arg
      115              120              125
Gln Pro Ala Gly Pro Gly Ser Gly Ile Arg Glu Arg Leu Glu His Pro
      130              135              140
Val Leu His Val Ser Trp Asn Asp Ala Arg Ala Tyr Cys Ala Trp Arg
145              150              155              160
Gly Lys
```

<210> 6081
<211> 655
<212> DNA
<213> Homo sapiens

<400> 6081
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gataatgatc aggaacctcc ctattcaatg ataacattac acgaaatggc agaaacagat
60
gaaggatggt tggatgttgt ccagtcttta attagagtta ttcactgga agatccactg
120
ggaccagctg ttataacatt gttactagat gaatgtccat tgcccactaa agatgcactc
180
cagaaattga ctgaaattct caatttaaat ggagaagtag cttgccagga ctcaagccat
240
cctgccaaac acaggaacac atctgcagtc ctaggctgct tggccgagaa actagcaggt
300
cctgcaagta taggtttact tagcccagga atactggaat acttgctaca gtgtctgaag
360
ttacagtccc accccacagt catgcttttt gcacttatcg cactggaaaa gtttgcacag
420
acaagtgaaa ataaattgac tatttctgaa tccagtatta gtgaccggct tgtcacattg
480
gagtcctggg ctaatgatcc tgattatctg aaacgtcaag ttggtttctg tgcccagtgg
540
agcttagaca atctcttttt aaaagaaggt agacagctga cctatgaaga agtgaacttg
600
agtagcatta gggccatgct gaatagcaat gatgtcagcg agtacctgaa gatct
655
```

<210> 6082
<211> 218
<212> PRT
<213> Homo sapiens

<400> 6082
```
Asp Asn Asp Gln Glu Pro Pro Tyr Ser Met Ile Thr Leu His Glu Met
1               5               10              15
Ala Glu Thr Asp Glu Gly Trp Leu Asp Val Val Gln Ser Leu Ile Arg
              20              25              30
Val Ile Pro Leu Glu Asp Pro Leu Gly Pro Ala Val Ile Thr Leu Leu
      35              40              45
Leu Asp Glu Cys Pro Leu Pro Thr Lys Asp Ala Leu Gln Lys Leu Thr
      50              55              60
Glu Ile Leu Asn Leu Asn Gly Glu Val Ala Cys Gln Asp Ser Ser His
```

```
65                    70                    75                    80
Pro Ala Lys His Arg Asn Thr Ser Ala Val Leu Gly Cys Leu Ala Glu
                  85                    90                    95
Lys Leu Ala Gly Pro Ala Ser Ile Gly Leu Leu Ser Pro Gly Ile Leu
              100                   105                   110
Glu Tyr Leu Leu Gln Cys Leu Lys Leu Gln Ser His Pro Thr Val Met
          115                   120                   125
Leu Phe Ala Leu Ile Ala Leu Glu Lys Phe Ala Gln Thr Ser Glu Asn
          130                   135                   140
Lys Leu Thr Ile Ser Glu Ser Ser Ile Ser Asp Arg Leu Val Thr Leu
      145                   150                   155                   160
Glu Ser Trp Ala Asn Asp Pro Asp Tyr Leu Lys Arg Gln Val Gly Phe
                  165                   170                   175
Cys Ala Gln Trp Ser Leu Asp Asn Leu Phe Leu Lys Glu Gly Arg Gln
              180                   185                   190
Leu Thr Tyr Glu Lys Val Asn Leu Ser Ser Ile Arg Ala Met Leu Asn
          195                   200                   205
Ser Asn Asp Val Ser Glu Tyr Leu Lys Ile
      210                   215
```

```
<210> 6083
<211> 358
<212> DNA
<213> Homo sapiens

<400> 6083
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gaaaaagaac aggagctcca ggcaaaaata gaagctttgc aagctgataa tgatttcacc
120
aatgaaaggc taacagcttt acaagagaag ctgatcgtcg aagggcatct aaccaaagcg
180
gtagaagaaa caaagctttc aaaagaaaat cagacaagag caaaagaatc tgatttttca
240
gatactctga gtccaagcaa ggaaaaaagc agtgacgaca ctacagacgc ccaaatggat
300
gagcaagacc taaatgagcc tcttgccaaa gtgtcccttt aaaagatga cttgcagg
358
```

```
<210> 6084
<211> 101
<212> PRT
<213> Homo sapiens

<400> 6084
Met Glu Glu Lys Glu Gln Glu Leu Gln Ala Lys Ile Glu Ala Leu Gln
1                 5                    10                   15
Ala Asp Asn Asp Phe Thr Asn Glu Arg Leu Thr Ala Leu Gln Glu Lys
              20                   25                   30
Leu Ile Val Glu Gly His Leu Thr Lys Ala Val Glu Glu Thr Lys Leu
          35                   40                   45
Ser Lys Glu Asn Gln Thr Arg Ala Lys Glu Ser Asp Phe Ser Asp Thr
      50                   55                   60
Leu Ser Pro Ser Lys Glu Lys Ser Ser Asp Asp Thr Thr Asp Ala Gln
```

```
65                      70                      75                      80
Met Asp Glu Gln Asp Leu Asn Glu Pro Leu Ala Lys Val Ser Leu Leu
                        85                      90                      95
Lys Asp Asp Leu Gln
                100
```

```
<210> 6085
<211> 2307
<212> DNA
<213> Homo sapiens
```

```
<400> 6085
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60
agccaggtgg actttgacaa tcccgactac gagaggttcc ctaatttcca aaatgtggtt
120
ggttacgaaa cagtggttgg ccctggtgat gttctttaca tcccaatgta ctggtggcat
180
cacatagagt cattactaaa tggggggatt accatcactg tgaacttctg gtataaggg
240
gctcccaccc ctaagagaat tgaatatcct ctcaaagctc atcagaaagt ggccataatg
300
agaaacattg agaagatgct tggagaggcc ttggggaacc cacaagaggt ggggccttg
360
ttgaacacaa tgatcaaggg ccgatacaac tagcctgcca ggggtcaagg cctcctgcca
420
ggtgactgct atcccgtcca caccgcttca ttgatgagga caggagactc caagcgctag
480
tattgcacgc tgcacttaat ggactggact cttgccatgg cccaggagtc aggtgtttgg
540
agcgaggcag ggcagttggc actccactcc tatttggagg gacttcatac ccttgcctct
600
tgtgcccctg caccttctct ctctgccccc cgcctaaagt cctgcattca gtgtgtggag
660
ccccagcttt tggttgtcat catgtctgtg tgtatgttag tctgtcaact tcggaatgtg
720
tgcgtgtgtg tgcatgcaca cgcatgtatg tatctgttcc ctgttccttc tgggtcaggc
780
tgtcacttcc ggctctcagc cctatctcct gcaacctcag tgcctcagcc tgagagagag
840
atgagatgct cttggactcc ccactgcatc tgggctgcag ggcagagct agtctgacca
900
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960
gctaccggga ctctaatggg gtgaaagaga ggggaggctt gcctttgaga gcctatatag
1020
ccttcctgtg agagaggatt agataggggt ccaactgggc ctacaagtc aagccataca
1080
taaaaggacc ttgggacata agaaccaatg attgtgcata agttctaaat tagagacaca
1140
tatatgtttct ctctttcagc accagctctt gcccctatgc tgggtaccaa gggagttctc
1200
ctagctgtgg cttctctagg ttctaggggt gcaagcctct gtgtgtttgt ttgtgtgtgt
1260
```

```
ctgtgtgtgc gtatcacact aggggtgcaa gcctctgggt gtgtgtgtgt gtgtgcgtgc
1320
gtgtgtgtgt gtgtgtccgt gtgtgtgtgt gtgtgtgtcc acactggcca gcctccctac
1380
ttaccaaggt tctccactgc ttaccttttc cagtgggaca gtacagtgtg agccccgggg
1440
aagtactgcc tgacctatcc taagctttta cacttggatt ttgccatca tatgttggcc
1500
aggtctcact gcagcctgcc cgaggctaac tggctagagc ctccagccct atgatgctcc
1560
ctgcccaggc catatccttt attcctgctg agcttcctgg ctgaatagat gaaatggggt
1620
caagcccagg cagctcattc actacctgtg atccacctca gggcacgggc aaacacatag
1680
gcttgcgtct taaagccagc tcctctgcca gaccccgttg taatgtgcca caacaccctc
1740
aatagtcagg gcaactggtg gagcatggaa gtcgaatttc cttttctgtt aggagctact
1800
cctgggaacc cctctcaggg ctgcagctta caggtgggca gctgtgattg cacaacttga
1860
agggccatca ttcacatcta ttcagtggga gtggggtccc tgggattggg cagtgtggtg
1920
gccctgtgtc tcctcacctc tgctcctgtc ttcatcacct tctctctgga agggaagagg
1980
agttggaagg tctctggttt tcttttctctt ttttttttt ttgccaaagg tttacttcca
2040
gcatctgagc tctggctctc acccctgaag ctcagttata gtgcactgat gaactgagag
2100
gatgcgtgtg gatgtgtgtg catgcctgag tgcgtttttt gggagggggt gtttatttt
2160
agtaccccat tctgggggttc tctgatgcag tgtggatgtg aagatatggt accttctcaa
2220
gtgtagctct ttcaaatata gtcaatgctg ggaaaaaaaa aaaaaaaaaa aaaaaaaaaa
2280
aaaaaaaaaa aaaaaaaaaa aaaaaaa
2307


<210> 6086
<211> 84
<212> PRT
<213> Homo sapiens

<400> 6086
Met Leu Gly Thr Lys Gly Val Leu Leu Ala Val Ala Ser Leu Gly Ser
 1               5                  10                  15
Arg Gly Ala Ser Leu Cys Val Phe Val Cys Val Cys Leu Cys Val Arg
            20                  25                  30
Ile Thr Leu Gly Val Gln Ala Ser Gly Cys Val Cys Val Cys Ala Cys
        35                  40                  45
Val Cys Val Cys Val Ser Val Cys Val Cys Val Cys His Thr Gly
    50                  55                  60
Gln Pro Pro Tyr Leu Pro Arg Phe Ser Thr Ala Tyr Leu Phe Gln Trp
65                  70                  75                  80
Asp Ser Thr Val
```

<210> 6087
<211> 1506
<212> DNA
<213> Homo sapiens

<400> 6087
ncggccccg ggagctgtgc tctatggagc tattgcggcc gtgggtggtc gcgggcgatg
60
cggggctgcc agctcctcgg gcttcgtagc tcttggcccg gggacctact aagtgctcgg
120
ctcttgtccc aagagaagcg ggcagcggaa acgcactttg ggtttgagac tgtgtcggaa
180
gaggagaagg ggggcaaagt ctatcaggtg tttgaaagtg tggctaagaa gtatgatgtg
240
atgaatgata tgatgagtct cggcatccat cgtgtttgga aggatttgct gctctggaag
300
atgcacccgc tgcccgggac ccagctgctc gacatggctg gaggcacagg tgacattgcg
360
ttccggttcc ttaattatgt tcagtcccag catcagagaa aacagaagag gcagttaagg
420
gcccaacaaa atttatcctg ggaagaaatt gccaaagagt accagaatga agaagattcc
480
ttgggcgggt ctcgtgtcgt ggtgtgtgac atcaacaagg agatgctaaa ggttggaaag
540
cagaaagcct tggctcaagg atacagagct ggacttgcat gggtattagg agatgctgaa
600
gaactgccct ttgatgatga caagtttgat atttacacca ttgcctttgg gatccggaat
660
gtcacacaca ttgatcaggc actccaggaa gctcatcggg tgctgaaacc aggaggacgg
720
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780
tatagcttcc aggtcatccc tgtcctggga gaggtcatcg ctggagactg gaagtcctat
840
cagtaccttg tagagagtat ccgaaggttt ccgtctcagg aagagttcaa ggacatgata
900
gaagatgcag gctttcacaa ggtgacttac gaaagtctaa catcaggcat tgtggccatt
960
cattctggct tcaaacttta attcctttcc tatcatggag catgaaccag tcatatcctg
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1080
taaggatacg tgccttggac tcatgtttga atcgaacagt ctcaaagtgg aagaacaaat
1140
tcttgtcact ttttacagc tttctttgga gctgcttcag tccatctccc agaggcattt
1200
ggtctgtatc tttgctcaac tgctaatttc tcttggctgt agggtgtgtg gttaaggtac
1260
aaccaccct aaagctcagt tttgaagtga gtgtatttat agcttcctg ctggtgctgc
1320
cttctagagg gatgatagat catttgaacc caatgacaat ttttaaccag aaaatttaat
1380

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tgtacctgaa tcaacctttc agcctaggac gaagtctagg cccaagtcag agtattaatg
1440
atcatgagaa ttgtgtgctg aaccagtaaa cgagtttacc tttaaaaaaa aaaaaaaaaa
1500
aaaaaa
1506
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```
<210> 6088
<211> 326
<212> PRT
<213> Homo sapiens

<400> 6088
Xaa Ala Pro Gly Ser Cys Ala Leu Trp Ser Tyr Cys Gly Arg Gly Trp
1               5                   10                  15
Ser Arg Ala Met Arg Gly Cys Gln Leu Leu Gly Leu Arg Ser Ser Trp
            20                  25                  30
Pro Gly Asp Leu Leu Ser Ala Arg Leu Leu Ser Gln Glu Lys Arg Ala
        35                  40                  45
Ala Glu Thr His Phe Gly Phe Glu Thr Val Ser Glu Glu Glu Lys Gly
    50                  55                  60
Gly Lys Val Tyr Gln Val Phe Glu Ser Val Ala Lys Lys Tyr Asp Val
65                  70                  75                  80
Met Asn Asp Met Met Ser Leu Gly Ile His Arg Val Trp Lys Asp Leu
                85                  90                  95
Leu Leu Trp Lys Met His Pro Leu Pro Gly Thr Gln Leu Leu Asp Met
            100                 105                 110
Ala Gly Gly Thr Gly Asp Ile Ala Phe Arg Phe Leu Asn Tyr Val Gln
        115                 120                 125
Ser Gln His Gln Arg Lys Gln Lys Arg Gln Leu Arg Ala Gln Gln Asn
    130                 135                 140
Leu Ser Trp Glu Glu Ile Ala Lys Glu Tyr Gln Asn Glu Glu Asp Ser
145                 150                 155                 160
Leu Gly Gly Ser Arg Val Val Val Cys Asp Ile Asn Lys Glu Met Leu
                165                 170                 175
Lys Val Gly Lys Gln Lys Ala Leu Ala Gln Gly Tyr Arg Ala Gly Leu
            180                 185                 190
Ala Trp Val Leu Gly Asp Ala Glu Glu Leu Pro Phe Asp Asp Asp Lys
        195                 200                 205
Phe Asp Ile Tyr Thr Ile Ala Phe Gly Ile Arg Asn Val Thr His Ile
    210                 215                 220
Asp Gln Ala Leu Gln Glu Ala His Arg Val Leu Lys Pro Gly Gly Arg
225                 230                 235                 240
Phe Leu Cys Leu Glu Phe Ser Gln Val Asn Asn Pro Leu Ile Ser Arg
                245                 250                 255
Leu Tyr Asp Leu Tyr Ser Phe Gln Val Ile Pro Val Leu Gly Glu Val
            260                 265                 270
Ile Ala Gly Asp Trp Lys Ser Tyr Gln Tyr Leu Val Glu Ser Ile Arg
        275                 280                 285
Arg Phe Pro Ser Gln Glu Glu Phe Lys Asp Met Ile Glu Asp Ala Gly
    290                 295                 300
Phe His Lys Val Thr Tyr Glu Ser Leu Thr Ser Gly Ile Val Ala Ile
305                 310                 315                 320
His Ser Gly Phe Lys Leu
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325

<210> 6089
<211> 4211
<212> DNA
<213> Homo sapiens

<400> 6089
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aagagtgtaa cacagccagc ctcgaagact tccctctgag ttggaatgat aatgaccgaa
120
tcccgagaag ttatagactt agacccccca gctgagactt cccaggagca ggaagacctt
180
ttcatagtga aggtggaaga agaagactgc acctggatgc aggagtacaa cccgccaacg
240
tttgagactt tttaccacg cttcaggcac ttccagtacc atgaggcttc aggaccccgg
300
gaggctctca gccaactccg ggtgctctgc tgtgagtggc tgaggcccga gctgcacacg
360
aaggagcaga tcctggagct gctggtgctg gagcagttcc tgaccatcct gcctgaagag
420
ttccagccct gggtgaggga acatcaccct gaaagtggag aagaggcggt ggccgtgata
480
gaaaatatac agcgagaact tgaggaacgc agacagcaga ttgttgcctg ccctgatgtg
540
cttcctcgga agatggcaac acctggagca gtgcaggagt cctgcagccc ccatcccctg
600
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660
cttcctgttc tccaagttcc ttcccttccc ctgaaggaca gccaggagct gacagcttca
720
cttctctcaa ctgggtccca gaagttggtg aaaattgaag aggtggctga tgtggctgta
780
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840
gacaggaagg agaactatgg gagtattact tccatgggtt atgagtccag ggacaatatg
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960
accgaaagga gcgttcctca ggatccagac tttgcagaag tcagtgacct taaaggcatg
1020
gtacaaaggt ggcaggtcaa ccccactgtg gggaaatcaa ggcagaatcc ttcccagaaa
1080
agggatctgg atgcaatcac agacatcagc cctaagcaaa gcacacatgg cgagagaggg
1140
cacagatgca gcgattgtgg caaattcttc ctccaagcct caaactttat tcagcatcgg
1200
cgcatccaca ctggagaaaa accgtttaag tgcggagaat gtgggaagag ctacaatcag
1260
cgggtgcacc tcacccagca ccagcgcgtc cacacagggg agaaaccta caaatgtcag
1320
gtgtgcggaa aggctttccg ggtgagttcc cacctggttc agcaccacag tgtccacagc
1380

```
ggagagaggc cctatggctg caatgagtgt gggaagaact tcggtcgcca ttcgcatctg
1440
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1500
aagaacacaa aattaagtgt taagaagaaa atttcagaat attcagaagc agacatggaa
1560
ctatctggaa aaacccaaag aaatgtttct caagttcaag attttggaga aggctgtgag
1620
tttcaaggca agctggatag aaagcaggga attcccatga aagagatact aggacaacca
1680
tcttcaaaga ggatgagaacta cagtgaagtc ccatatgtcc acaaaaaatc ctccactgga
1740
gagagaccac ataaatgtaa cgagtgtggg aaaagcttca ttcagagtgc acatcttatt
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1860
tacaaccaac gcgtgcacct aactcagcat cagcgcgtcc acacaggtga gaagccctac
1920
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1980
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2040
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2100
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2160
cagaaaaatg aaaaaaatgg catctgtgag gaagcatata gttggaactt gacagtgatt
2220
gaagacaaga agattgagtt acaagacag cctatcagt gtgatatctg tggaaaagcc
2280
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2340
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2400
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2460
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2520
tgtggaatga atttcagctg gagttgtagc ctctttaaac acctgagaag ccatgagagg
2580
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2700
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2760
gcctttagga acaccggaga acccacaata atagaaatct tttcgtgttc cccattgaga
2820
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2880
acatggtcga ggaattcgga aagcctgcag ttgacattca gtcttcactt gaaactcaaa
2940
actgacacta ggaacagctt catgagttca gtagaagtaa gctttatttg tagcttctgc
3000
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cttgtttgac ggcgtatcta ttcagggaag cgcacagtaa aagaattcct tagcatgatg
3060
tctgttttgg tacctcagca atgaaccttt tctagaaatt attattccaa ccactagaat
3120
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3180
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3240
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3600
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3660
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3720
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3780
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3840
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3900
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3960
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4020
ctggttcatt tgattaaagc ggagaaaact ccagggtgct atgactgctc tggcaccctt
4080
ggatcaggcc aagctagact ttttctgagc cttcatccgt gctaagctct ctcccttctc
4140
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4200
tggttctgaa a
4211


<210> 6090
<211> 839
<212> PRT
<213> Homo sapiens

<400> 6090
Met Ile Met Thr Glu Ser Arg Glu Val Ile Asp Leu Asp Pro Pro Ala
1               5                   10                  15
Glu Thr Ser Gln Gln Gln Glu Asp Leu Phe Ile Val Lys Val Glu Glu
            20                  25                  30
Glu Asp Cys Thr Trp Met Gln Glu Tyr Asn Pro Pro Thr Phe Glu Thr
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```
         35                      40                      45
Phe Tyr Gln Arg Phe Arg His Phe Gln Tyr His Glu Ala Ser Gly Pro
    50                      55                      60
Arg Glu Ala Leu Ser Gln Leu Arg Val Leu Cys Cys Glu Trp Leu Arg
65                      70                      75                      80
Pro Glu Leu His Thr Lys Glu Gln Ile Leu Glu Leu Leu Val Leu Glu
                85                      90                      95
Gln Phe Leu Thr Ile Leu Pro Glu Glu Phe Gln Pro Trp Val Arg Glu
            100                     105                     110
His His Pro Glu Ser Gly Glu Glu Ala Val Ala Val Ile Glu Asn Ile
        115                     120                     125
Gln Arg Glu Leu Glu Glu Arg Gln Gln Ile Leu Val Ala Cys Pro Asp
    130                     135                     140
Val Leu Pro Arg Lys Met Ala Thr Pro Gly Ala Val Gln Glu Ser Cys
145                     150                     155                     160
Ser Pro His Pro Leu Thr Val Asp Thr Gln Pro Glu Gln Ala Pro Gln
                165                     170                     175
Lys Pro Arg Leu Leu Glu Glu Asn Ala Leu Pro Val Leu Gln Val Pro
            180                     185                     190
Ser Leu Pro Leu Lys Asp Ser Gln Glu Leu Thr Ala Ser Leu Leu Ser
        195                     200                     205
Thr Gly Ser Gln Lys Leu Val Lys Ile Glu Glu Val Ala Asp Val Ala
    210                     215                     220
Val Ser Phe Ile Leu Glu Glu Trp Gly His Leu Asp Gln Ser Gln Lys
225                     230                     235                     240
Ser Leu Tyr Arg Asp Asp Arg Lys Glu Asn Tyr Gly Ser Ile Thr Ser
                245                     250                     255
Met Gly Tyr Glu Ser Arg Asp Asn Met Glu Leu Ile Val Lys Gln Ile
            260                     265                     270
Ser Asp Asp Ser Glu Ser His Trp Val Ala Pro Glu His Thr Glu Arg
        275                     280                     285
Ser Val Pro Gln Asp Pro Asp Phe Ala Glu Val Ser Asp Leu Lys Gly
    290                     295                     300
Met Val Gln Arg Trp Gln Val Asn Pro Thr Val Gly Lys Ser Arg Gln
305                     310                     315                     320
Asn Pro Ser Gln Lys Arg Asp Leu Asp Ala Ile Thr Asp Ile Ser Pro
                325                     330                     335
Lys Gln Ser Thr His Gly Glu Arg Gly His Arg Cys Ser Asp Cys Gly
            340                     345                     350
Lys Phe Phe Leu Gln Ala Ser Asn Phe Ile Gln His Arg Arg Ile His
        355                     360                     365
Thr Gly Glu Lys Pro Phe Lys Cys Gly Glu Cys Gly Lys Ser Tyr Asn
    370                     375                     380
Gln Arg Val His Leu Thr Gln His Gln Arg Val His Thr Gly Glu Lys
385                     390                     395                     400
Pro Tyr Lys Cys Gln Val Cys Gly Lys Ala Phe Arg Val Ser Ser His
                405                     410                     415
Leu Val Gln His His Ser Val His Ser Gly Glu Arg Pro Tyr Gly Cys
            420                     425                     430
Asn Glu Cys Gly Lys Asn Phe Gly Arg His Ser His Leu Ile Glu His
        435                     440                     445
Leu Lys Arg His Phe Arg Glu Lys Ser Gln Arg Cys Ser Asp Lys Arg
    450                     455                     460
Ser Lys Asn Thr Lys Leu Ser Val Lys Lys Lys Ile Ser Glu Tyr Ser
```

```
465                     470                     475                     480
Glu Ala Asp Met Glu Leu Ser Gly Lys Thr Gln Arg Asn Val Ser Gln
                485                     490                     495
Val Gln Asp Phe Gly Glu Gly Cys Glu Phe Gln Gly Lys Leu Asp Arg
            500                     505                     510
Lys Gln Gly Ile Pro Met Lys Glu Ile Leu Gly Gln Pro Ser Ser Lys
        515                     520                     525
Arg Met Asn Tyr Ser Glu Val Pro Tyr Val His Lys Lys Ser Ser Thr
    530                     535                     540
Gly Glu Arg Pro His Lys Cys Asn Glu Cys Gly Lys Ser Phe Ile Gln
545                     550                     555                     560
Ser Ala His Leu Ile Gln His Gln Arg Ile His Thr Gly Glu Lys Pro
                565                     570                     575
Phe Arg Cys Glu Glu Cys Gly Lys Ser Tyr Asn Gln Arg Val His Leu
            580                     585                     590
Thr Gln His Gln Arg Val His Thr Gly Glu Lys Pro Tyr Thr Cys Pro
        595                     600                     605
Leu Cys Gly Lys Ala Phe Arg Val Arg Ser His Leu Val Gln His Gln
    610                     615                     620
Ser Val His Ser Gly Glu Arg Pro Phe Lys Cys Asn Glu Cys Gly Lys
625                     630                     635                     640
Gly Phe Gly Arg Arg Ser His Leu Ala Gly His Leu Arg Leu His Ser
                645                     650                     655
Arg Glu Lys Ser His Gln Cys Arg Glu Cys Gly Glu Ile Phe Phe Gln
            660                     665                     670
Tyr Val Ser Leu Ile Glu His Gln Val Leu His Met Gly Gln Lys Asn
        675                     680                     685
Glu Lys Asn Gly Ile Cys Glu Glu Ala Tyr Ser Trp Asn Leu Thr Val
    690                     695                     700
Ile Glu Asp Lys Lys Ile Glu Leu Gln Glu Gln Pro Tyr Gln Cys Asp
705                     710                     715                     720
Ile Cys Gly Lys Ala Phe Gly Tyr Ser Ser Asp Leu Ile Gln His Tyr
                725                     730                     735
Arg Thr His Thr Ala Glu Lys Pro Tyr Gln Cys Asp Ile Cys Arg Glu
            740                     745                     750
Asn Val Gly Gln Cys Ser His Thr Lys Gln His Gln Lys Ile Tyr Ser
        755                     760                     765
Ser Thr Lys Ser His Gln Cys His Glu Cys Gly Arg Gly Phe Thr Leu
    770                     775                     780
Lys Ser His Leu Asn Gln His Gln Arg Ile His Thr Gly Glu Lys Pro
785                     790                     795                     800
Phe Gln Cys Lys Glu Cys Gly Met Asn Phe Ser Trp Ser Cys Ser Leu
                805                     810                     815
Phe Lys His Leu Arg Ser His Glu Arg Thr Asp Pro Ile Asn Thr Leu
            820                     825                     830
Ser Val Glu Gly Ser Leu Leu
        835
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<210> 6091
<211> 1336
<212> DNA
<213> Homo sapiens

<400> 6091

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ttttttcttt ttttttttttt tccataaaaa gcactttgtt taattttatc aaatcgatct
60
gtacaaaagt tagcgttgct tggtcagaaa ggagtgaagg cagcaggggga gtgagggtgc
120
gtcctccgaa cgcggtgcca agggagacgc tgcatgaaac gggtctgcga cggctcccgg
180
cccccacccc cacccccaga gaaatagaag cagaggcatt atctttttttt tctacaaaaa
240
agtaggaaaa gtagaaaaag tacaaagaag caacttctcg gctgtgttta agtttacaaa
300
gtttaaaggc acaagtttcc gtgaagtagg cgctattgta tgctctatgc tcagcacaca
360
ggggaagcag tgcaggtgaa tcaggtatga ctcgtctaga actgaggccc taacgacgtt
420
tagtggagaa ggtttagttt cacagcttgg taggtggcac tggtgcctgc gagccaagat
480
cacttctgaa gccaccactt tccaggaatt cctgtgtcct gtgtcctacc acatggcaca
540
gtcatgggca aggacccagg aattcctgtg tcctatgtgt cctaccacgt ggcacagtcg
600
gggacaggga cggagtcctg cttcccaaac cccaaactgg tactgggtgc tggggcaccc
660
caacctgatc agagatgtca caaggcaggt cccttctcct ccctcgggtt ttcggttgcc
720
aagctcgagg catgagggggc ccagtcctcc cagggacctt gggacctccg ggccctccag
780
ggcggcctcc cataagccga gcaacgagca acgtgatgcc ggccaacagc tgcaactcca
840
cctcctgcct gccctcaagg gaagcttccc agcttccgtt ttgtcttaaa ttctactctt
900
tgcccgaatt acctcattaa ttaaagataa aataacacag aacataaata catctttaac
960
agctttcaga agaaacacat ttaagcttca aaaataaaaa ttatcaaaaa cataaaaata
1020
aaagagagat gtgttcatca cagccagccc tcgcgtgagc gcactctgcc agcaaggaga
1080
cacctcagat ctgacaggca ggtcccggag atgctcgagt agactcatcc cagtctgcgg
1140
acagacaccc cggatcccgg acagcccgtg cagccgttgt cgagggaatg tggccttgag
1200
tgcaggggct ctcggcgcca agaccggcct ggacctcaca gcgccctgca aggcccctgc
1260
cacccctcc tttggtcctt gggctgtgct gccgtttctc ctctaccgag atgcaaagcg
1320
aaggtgctgg tgccgc
1336

<210> 6092
<211> 118
<212> PRT
<213> Homo sapiens

<400> 6092
Met Ala Gln Ser Trp Ala Arg Thr Gln Glu Phe Leu Cys Pro Met Cys
```

```
1                5                   10                  15
Pro Thr Thr Trp His Ser Arg Gly Gln Gly Arg Ser Pro Ala Ser Gln
                 20                  25                  30
Thr Pro Asn Trp Tyr Trp Val Leu Gly His Pro Asn Leu Ile Arg Asp
         35                  40                  45
Val Thr Arg Gln Val Pro Ser Pro Pro Ser Gly Phe Arg Leu Pro Ser
     50                  55                  60
Ser Arg His Glu Gly Pro Ser Pro Pro Arg Asp Leu Gly Thr Ser Gly
65                  70                  75                  80
Pro Ser Arg Ala Ala Ser His Lys Pro Ser Asn Glu Gln Arg Asp Ala
                 85                  90                  95
Gly Gln Gln Leu Gln Leu His Leu Leu Pro Ala Leu Lys Gly Ser Phe
             100           ·        105                 110
Pro Ala Ser Val Leu Ser
         115
```

```
<210> 6093
<211> 1998
<212> DNA
<213> Homo sapiens
```

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<400> 6093
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aaactttaag aaaggcgctt cataagcaga agacacagaa tgccaccctc ctcaaggagg
120
caagcacgga atgccacctt cctcaagcac gcaagctagg caggccctgc acgttctcac
180
tcctctccca gaagccagct tcctgcctag ggcccagcct gctaaaggat ggaaattaat
240
agcatttggt cacttgaggt ggccccagag ctacttgcct acccaccagg ccccagggag
300
agtggctggg cctcaacctg tgacctacat gcagggtctc tgcacccaca gactctgccc
360
tcagtccagc tgctgcagtt agctacttga cacaggaggg aactgaggct ccaattcctg
420
gcagtaggtg gcttggctaa agcccagcc agccatggct gctggtgggg gaaggctgtt
480
cctaaggcaa gatggcaggg gatcacatga ctgggcaact gatgtccttc ttgctcttgt
540
cctgggcag atggagggaa agccagactg tggcatgggg gcccagtttg cacaaggagg
600
ctgatgggg ctcccgaacc agtgcattgc tgctcacctc tgctccggcc ccacgcagcc
660
cagagaagac atctgcccct cctgatcctt gactactacc tcaagaacaa agtgacagta
720
caataacgat aacgaaggca ttgacctgtg cagcaggcct cagtgggggt ggggaacaga
780
gcagaaaggc caggcatgt tgctgtgacc cccccctttc tctctttcag taaacaaaag
840
tgcacatgca gaaatctggg caggtcctat cggaagctgc tctcacccca gaggccccag
900
ggagagtggc tggacctcgg gagccagggc ctctgcacct acaggctctg ccctcagtcc
960
```

```
agctgctgca gcacgatgga gactggatgt gcccctagag tcagggacaa tgtgggggag
1020
aggctgggag aggaccaggg tgcagggatg gaccaggaaa gggaaagaag aaaatgtctc
1080
ttctcctaga aagttacagg agagcagccc atctggggct tgaaggcggg gaagtggctt
1140
cggattccaa cataccccta tcagcatttg aagaaatgac tgggatactg gacctgtttc
1200
ggctgagaag gaaccacaga gatccagata aatccccatc tgaggaggca cagaagttgg
1260
tggggattct cttctgaagg ctgacatgat cattacaagt aagtttttct aatgtggaca
1320
tcagagccac tctgggatcc acctcttcag aaatatacaa ggctggacac tatccagggg
1380
cagagactag actaggggac cccttaaatt cctcttccac tcttgaatcc tccagaccta
1440
agccctccaa tcatagctca ctgagaggaa ggggctgcag aaaatgtcct tgttttgcaa
1500
aaaaaggaaa caggggccaaa gagagagagg ccacacagct aatgtcctcc tcacaaagag
1560
gcctctcatc tccctcaaga ggctccagct gggtcctacg ttccccccaa ctgagggatg
1620
aacctagagc ctggacccaa ggcctctgca gctactcaga ataggtggga ggaggggctg
1680
gctttgaggc tgccttagcc atgaggctct ttgcctagga atagctggag atgggagctg
1740
caggggggctc agctgtgtgct tattcagaag tcaggaatgt aaactactgg ggatggggaa
1800
cagagatgat gtcattccca gatacccaa ctgccgcccc caaagccctg gggcagtttg
1860
gaacgaccac acaaacacat aggtcccagc gtgtgtgctc ccagccccag ccccagccca
1920
gagcccaggc cagatagcca gcagtagccc tgggtggcac ctggcaccac tggccagagc
1980
agagtaggaa ggacgcccc
1998

<210> 6094
<211> 136
<212> PRT
<213> Homo sapiens

<400> 6094
Met Ile Met Ser Ala Phe Arg Arg Glu Ser Pro Pro Thr Ser Val Pro
1               5                   10                  15
Pro Gln Met Gly Ile Tyr Leu Asp Leu Cys Gly Ser Phe Ser Ala Glu
            20                  25                  30
Thr Gly Pro Val Ser Gln Ser Phe Leu Gln Met Leu Ile Gly Val Cys
        35                  40                  45
Trp Asn Pro Lys Pro Leu Pro Arg Leu Gln Ala Pro Asp Gly Leu Leu
    50                  55                  60
Ser Cys Asn Phe Leu Gly Glu Thr Phe Ser Phe Pro Phe Leu
65                  70                  75                  80
Val His Pro Cys Thr Leu Val Leu Ser Gln Pro Leu Pro His Ile Val
```

```
                    85              90              95
Pro Asp Ser Arg Gly Thr Ser Ser Leu His Arg Ala Ala Ala Ala Gly
            100             105             110
Leu Arg Ala Glu Pro Val Gly Ala Glu Ala Leu Ala Pro Glu Val Gln
        115             120             125
Pro Leu Ser Leu Gly Pro Leu Gly
    130             135
```

```
<210> 6095
<211> 441
<212> DNA
<213> Homo sapiens

<400> 6095
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acctgcgccc tggcctctca ctccgggagc tcaggctcca agtcgggagg cgacaagatg
120
ttctccctca agaagtggaa cgcggtggcc atgtggagct gggacgtgga gtgcgatacg
180
tgcgccatct gcagggtcca ggtgatggtg gtctggggag aatgtaatca ttccttccac
240
aactgctgta tgtccctgtg ggtgaaacag aacaatcgct gccctctctg ccagcaggac
300
tgggtggtcc aaagaatcgg caaatgagag tggttagaag gcttcttagc gcagttgttc
360
agagcccctgg tggatcttgt aatccagtgc cctacaaagg ctagaacact acaggggatg
420
aattcttcaa atagggaccg t
441
```

```
<210> 6096
<211> 97
<212> PRT
<213> Homo sapiens

<400> 6096
Met Ala Asp Val Glu Asp Gly Glu Glu Thr Cys Ala Leu Ala Ser His
1               5               10              15
Ser Gly Ser Ser Gly Ser Lys Ser Gly Gly Asp Lys Met Phe Ser Leu
            20              25              30
Lys Lys Trp Asn Ala Val Ala Met Trp Ser Trp Asp Val Glu Cys Asp
        35              40              45
Thr Cys Ala Ile Cys Arg Val Gln Val Met Val Val Trp Gly Glu Cys
    50              55              60
Asn His Ser Phe His Asn Cys Cys Met Ser Leu Trp Val Lys Gln Asn
65              70              75              80
Asn Arg Cys Pro Leu Cys Gln Gln Asp Trp Val Val Gln Arg Ile Gly
            85              90              95
Lys
```

```
<210> 6097
<211> 2404
```

<212> DNA
<213> Homo sapiens

<400> 6097
cggtttgtgg cccgggaaaa gataatgtct gtgctgagtg aatgggggcct gttccggggc
60
ctccagaacc accccatggt actgcccatc tgcagccgtt ctggggatgt gatagaatac
120
ctgctgaaga accagtggtt tgtccgctgc caggaaatgg gggcccgagc tgccaaggct
180
gtggagtcgg gggccctgga gctcagtccc tccttccacc agaagaactg gcaacactgg
240
tttcccata ttggggactg gtgtgtctcc cggcagctgt ggtggggcca tcagattcca
300
gcctacctgg ttntantagg accatgcgca nngggagaag agnngacctg ttgggtggtc
360
ggccggtcag gggctgaggc cagagagtta gcagcggaac tgacagggag gcaagggggca
420
gagccgaccc tggagaggga tcctgatgtc ctagacacat ggttttcttc tgccctgttc
480
cccttttctg ccctgggctg gccccaagag accccagacc ttgctcgttt ctaccccctg
540
tcactttgg aaacgggcag cgaccttctg ctgttctggg tgggccgcat ggtcatgttg
600
gggacccagc tcacagggca gctgcccttc agcaaggtgc ttcttcatcc catggttcgg
660
gacaggcagg gccggaagat gagcaagtcc ctggggaatg tgctggaccc aagagacatc
720
atcagtgggg tggagatgca gttgctgcag gaaaagctga gaagcggaaa tttggaccct
780
gcagagctgg ccattgtggc tgcagcacag aaaaaggact ttcctcacgg gatccctgag
840
tgtgggacag atgccctgag attcacactc tgctcccatg gagttcaggc gggcgacttg
900
cacctgtcag tctctgaggt ccagagctgc cgacatttct gcaacaagat ctggaatgct
960
cttgcttta tcctcaatgc tttaggggag aaatttgtgc cacagcctgc tgaggagctg
1020
tctccctcct ccccgatgga tgcctggatc ctgagccgcc ttgccctggc tgcccaggag
1080
tgtgagcggg gcttcctcac ccgagagctc tcgctcgtca ctcatgccct gcaccacttc
1140
tggcttcaca acctctgtga cgtctacctg gaggctgtga agcccgtgct gtggcactcg
1200
ccccgcccccc tggggccccc tcaggtcctg ttctcctgcg ctgacctcgg cctccgcctc
1260
ctggccccac tgatgccctt cctggctgaa gagctctggc agaggctgcc cccaggcct
1320
ggttgccccc ctgccccagg catctctggtt gcccctacc ccagcgcctg cagcttggag
1380
cactggcgcc agcagagct ggagcggcgc ttctcccggg tccaagaggt cgtgcaggtg
1440
ctaagggctc tccgagccac gtaccagctc accaaagccc ggccccgagt gctgctgcag
1500

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agctcagagc ctggggacca gggcctcttc gaggccttct tggagcccct gggcaccctg
1560
ggctactgtg gggctgtggg cctgttaccc ccaggcacag cagctccctc cggctgggcc
1620
caggctccac tcagtgacac ggctcaagtc tacatggagc tgcagggcct ggtggacccg
1680
cagatccagc tacctctgtt agccgcccga aggtacaagt tgcagaagca gcttgacagc
1740
ctcacagcca ggaccccatc agaaggggag gcagggactc agaggcaaca aaagctttct
1800
tccctccagc tggaattgtc aaaactggac aaggcagcct ctcacctccg gcagctgatg
1860
gatgagcctc cagccccagg gagcccggag ctctaactca tcatccccat cagttttcct
1920
ccctctcaga cctgtctttg aggacaaaca gatttgtcag ctgtcagggt gcagtgggac
1980
gtcagagact atgtggtcca tcgccttcat tgtgtaaatg aggacacaga ctggcttggt
2040
cgcagtgact gtggtgtcct tgagatgctc acattactgc ccggcctgcc tcccacctgg
2100
aagtctggga atgaggagat tgagataaac ttttgaaatc ccaaacatgt ctgttttatgg
2160
ctctttggtc ccctttgctc ccagtggtga cttttgtgct tctgagttgt ccctgagag
2220
cttggtctgg gaaaagagga ggaggggtcc tcactggagg aagaggaacc tttcagtcac
2280
gggtaggta atgggacagt ggttccggtt ctacctcctt tcttggactg acaggtgcct
2340
ggcttttgc agggtccttc tcctccaatt ctcactaaat ggaaggttcc ccgctccttg
2400
gctt
2404
```

```
<210> 6098
<211> 631
<212> PRT
<213> Homo sapiens
```

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<400> 6098
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Leu Phe Arg Gly Leu Gln Asn His Pro Met Val Leu Pro Ile Cys Ser
              20                  25                  30
Arg Ser Gly Asp Val Ile Glu Tyr Leu Leu Lys Asn Gln Trp Phe Val
          35                  40                  45
Arg Cys Gln Glu Met Gly Ala Arg Ala Ala Lys Ala Val Glu Ser Gly
      50                  55                  60
Ala Leu Glu Leu Ser Pro Ser Phe His Gln Lys Asn Trp Gln His Trp
 65                  70                  75                  80
Phe Ser His Ile Gly Asp Trp Cys Val Ser Arg Gln Leu Trp Trp Gly
                  85                  90                  95
His Gln Ile Pro Ala Tyr Leu Val Xaa Xaa Pro Cys Ala Xaa Gly
              100                 105                 110
Glu Glu Xaa Thr Cys Trp Val Val Gly Arg Ser Gly Ala Glu Ala Arg
```

```
        115                    120                    125
Glu Leu Ala Ala Glu Leu Thr Gly Arg Gln Gly Ala Glu Pro Thr Leu
    130                    135                    140
Glu Arg Asp Pro Asp Val Leu Asp Thr Trp Phe Ser Ser Ala Leu Phe
145                    150                    155                    160
Pro Phe Ser Ala Leu Gly Trp Pro Gln Glu Thr Pro Asp Leu Ala Arg
                   165                    170                    175
Phe Tyr Pro Leu Ser Leu Leu Glu Thr Gly Ser Asp Leu Leu Leu Phe
                   180                    185                    190
Trp Val Gly Arg Met Val Met Leu Gly Thr Gln Leu Thr Gly Gln Leu
        195                    200                    205
Pro Phe Ser Lys Val Leu Leu His Pro Met Val Arg Asp Arg Gln Gly
    210                    215                    220
Arg Lys Met Ser Lys Ser Leu Gly Asn Val Leu Asp Pro Arg Asp Ile
225                    230                    235                    240
Ile Ser Gly Val Glu Met Gln Leu Leu Gln Glu Lys Leu Arg Ser Gly
                   245                    250                    255
Asn Leu Asp Pro Ala Glu Leu Ala Ile Val Ala Ala Ala Gln Lys Lys
        260                    265                    270
Asp Phe Pro His Gly Ile Pro Glu Cys Gly Thr Asp Ala Leu Arg Phe
        275                    280                    285
Thr Leu Cys Ser His Gly Val Gln Ala Gly Asp Leu His Leu Ser Val
    290                    295                    300
Ser Glu Val Gln Ser Cys Arg His Phe Cys Asn Lys Ile Trp Asn Ala
305                    310                    315                    320
Leu Arg Phe Ile Leu Asn Ala Leu Gly Lys Glu Phe Val Pro Gln Pro
                   325                    330                    335
Ala Glu Glu Leu Ser Pro Ser Ser Pro Met Asp Ala Trp Ile Leu Ser
        340                    345                    350
Arg Leu Ala Leu Ala Ala Gln Glu Cys Glu Arg Gly Phe Leu Thr Arg
        355                    360                    365
Glu Leu Ser Leu Val Thr His Ala Leu His His Phe Trp Leu His Asn
    370                    375                    380
Leu Cys Asp Val Tyr Leu Glu Ala Val Lys Pro Val Leu Trp His Ser
385                    390                    395                    400
Pro Arg Pro Leu Gly Pro Pro Gln Val Leu Phe Ser Cys Ala Asp Leu
                   405                    410                    415
Gly Leu Arg Gly Leu Leu Ala Pro Leu Met Pro Phe Leu Ala Glu Leu
        420                    425                    430
Trp Gln Arg Leu Pro Pro Arg Pro Gly Cys Pro Pro Ala Pro Ser Ile
        435                    440                    445
Ser Val Ala Pro Tyr Pro Ser Ala Cys Ser Leu Glu His Trp Arg Gln
    450                    455                    460
Pro Glu Leu Glu Arg Arg Phe Ser Arg Val Gln Glu Val Val Gln Val
465                    470                    475                    480
Leu Arg Ala Leu Arg Ala Thr Tyr Gln Leu Thr Lys Ala Arg Pro Arg
                   485                    490                    495
Val Leu Leu Gln Ser Ser Glu Pro Gly Asp Gln Gly Leu Phe Glu Ala
        500                    505                    510
Phe Leu Glu Pro Pro Leu Gly Thr Leu Gly Tyr Cys Gly Ala Val Gly Leu
        515                    520                    525
Leu Pro Pro Gly Thr Ala Ala Pro Ser Gly Trp Ala Gln Ala Pro Leu
    530                    535                    540
Ser Asp Thr Ala Gln Val Tyr Met Glu Leu Gln Gly Leu Val Asp Pro
```

```
545                    550                    555                    560
Gln Ile Gln Leu Pro Leu Leu Ala Ala Arg Arg Tyr Lys Leu Gln Lys
                    565                    570                    575
Gln Leu Asp Ser Leu Thr Ala Arg Thr Pro Ser Glu Gly Glu Ala Gly
           580                    585                    590
Thr Gln Arg Gln Gln Lys Leu Ser Ser Leu Gln Leu Glu Leu Ser Lys
           595                    600                    605
Leu Asp Lys Ala Ala Ser His Leu Arg Gln Leu Met Asp Glu Pro Pro
      610                    615                    620
Ala Pro Gly Ser Pro Glu Leu
625                    630
```

```
<210> 6099
<211> 3957
<212> DNA
<213> Homo sapiens

<400> 6099
ggggctgccg gggccgggac tgggggagcc gggcccgcgg gccgcctgct gcctccgccc
60
gcgccggggt ccccagccgc ccccgctgcc gtgtcccctg cggccggcca gccgcgtccc
120
ccagccccgg cctcccgcgg acccatgccc gcccgtatcg gctactacga gatcgaccgc
180
accatcggca agggcaactt cgccggtggtc aagcgggcca cgcacctcgt caccaaggcc
240
aaggttgcta tcaagatcat agataagacc cagctggatg aagaaaactt gaagaagatt
300
ttccgggaag ttcaaattat gaagatgctt tgccacccccc atatcatcag gctctaccag
360
gttatggaga cagaacggat gatttatctg gtgacagaat atgctagtgg aggggaaata
420
tttgaccacc tggtggccca tggtagaatg gcagaaaagg aggcacgtcg gaagttcaaa
480
cagatcgtca cagctgtcta tttttgtcac tgtcggaaca ttgttcatcg tgatttaaaa
540
gctgaaaatt tacttctgga tgccaatctg aatatcaaaa tagcagattt tggtttcagt
600
aacctcttca ctcctgggca gctgctgaag acctggtgtg gcagccctcc ctatgctgca
660
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720
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gagcatttga tccgccatat gttggtgtta gatcccaata agcgcctctc catggagcag
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1080
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1380
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1740
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2340
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2400
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2460
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2520
tcccggggtt ccccccagcag ctacagccct tcaacaggag tggggttctc tccaacccaa
2580
gccctgaaag tccctccact tgaccaattc cccacctcc ctcccagtgc acatcagcag
2640
ccgccacact ataccacgtc ggcactacag caggccctgc tgtctcccac gccgccagac
2700
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tatacaagac accagcaggt accccacatc cttcaaggac tgctttctcc ccggcattcg
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2820
cagcagcaac aacggcagca gcagcagcaa cagcagcaac agcaagaata ccaggaactg
2880
ttcaggcaca tgaaccaagg ggatgcgggg agtctggctc ccagccttgg gggacagagc
2940
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aacagcgacg atgcttatgt acagctggat aacttgccag gaatgagtct cgtggctggg
3060
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3660
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3720
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3780
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3840
agtatacgtt gaatgtatat gaacatactt tcctatttct gttctttgaa aatgtcagaa
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3957
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<210> 6100
<211> 1102
<212> PRT
<213> Homo sapiens

<400> 6100
Gly Ala Ala Gly Ala Gly Thr Gly Gly Ala Gly Pro Ala Gly Arg Leu
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Leu Pro Pro Pro Ala Pro Gly Ser Pro Ala Ala Pro Ala Ala Val Ser
            20                  25                  30
Pro Ala Ala Gly Gln Pro Arg Pro Pro Ala Pro Ala Ser Arg Gly Pro
```

```
          35                    40                    45
Met Pro Ala Arg Ile Gly Tyr Tyr Glu Ile Asp Arg Thr Ile Gly Lys
    50                    55                    60
Gly Asn Phe Ala Val Val Lys Arg Ala Thr His Leu Val Thr Lys Ala
65                    70                    75                    80
Lys Val Ala Ile Lys Ile Ile Asp Lys Thr Gln Leu Asp Glu Glu Asn
                 85                    90                    95
Leu Lys Lys Ile Phe Arg Glu Val Gln Ile Met Lys Met Leu Cys His
            100                   105                   110
Pro His Ile Ile Arg Leu Tyr Gln Val Met Glu Thr Glu Arg Met Ile
         115                   120                   125
Tyr Leu Val Thr Glu Tyr Ala Ser Gly Gly Glu Ile Phe Asp His Leu
    130                   135                   140
Val Ala His Gly Arg Met Ala Glu Lys Glu Ala Arg Arg Lys Phe Lys
145                   150                   155                   160
Gln Ile Val Thr Ala Val Tyr Phe Cys His Cys Arg Asn Ile Val His
                 165                   170                   175
Arg Asp Leu Lys Ala Glu Asn Leu Leu Leu Asp Ala Asn Leu Asn Ile
            180                   185                   190
Lys Ile Ala Asp Phe Gly Phe Ser Asn Leu Phe Thr Pro Gly Gln Leu
         195                   200                   205
Leu Lys Thr Trp Cys Gly Ser Pro Pro Tyr Ala Ala Pro Glu Leu Phe
    210                   215                   220
Glu Gly Lys Glu Tyr Asp Gly Pro Lys Val Asp Ile Trp Ser Leu Gly
225                   230                   235                   240
Val Val Leu Tyr Val Leu Val Cys Gly Ala Leu Pro Phe Asp Gly Ser
                 245                   250                   255
Thr Leu Gln Asn Leu Arg Ala Arg Val Leu Ser Gly Lys Phe Arg Ile
            260                   265                   270
Pro Phe Phe Met Ser Thr Glu Cys Glu His Leu Ile Arg His Met Leu
         275                   280                   285
Val Leu Asp Pro Asn Lys Arg Leu Ser Met Glu Gln Ile Cys Lys His
    290                   295                   300
Lys Trp Met Lys Leu Gly Asp Ala Asp Pro Asn Phe Asp Arg Leu Ile
305                   310                   315                   320
Ala Glu Cys Gln Gln Leu Lys Glu Glu Arg Gln Val Asp Pro Leu Asn
                 325                   330                   335
Glu Asp Val Leu Leu Ala Met Glu Asp Met Gly Leu Asp Lys Glu Gln
            340                   345                   350
Thr Leu Gln Ala Glu Gln Ala Gly Thr Ala Met Asn Ile Ser Val Pro
         355                   360                   365
Gln Val Gln Leu Ile Asn Pro Glu Asn Gln Ile Val Glu Pro Asp Gly
    370                   375                   380
Thr Leu Asn Leu Asp Ser Asp Glu Gly Glu Glu Pro Ser Pro Glu Ala
385                   390                   395                   400
Leu Val Arg Tyr Leu Ser Met Arg Arg His Thr Val Gly Val Ala Asp
                 405                   410                   415
Pro Arg Thr Glu Val Met Glu Asp Leu Gln Lys Leu Leu Pro Gly Phe
         420                   425                   430
Pro Gly Val Asn Pro Gln Ala Pro Phe Leu Gln Val Ala Pro Asn Val
    435                   440                   445
Asn Phe Met His Asn Leu Leu Pro Met Gln Asn Leu Gln Pro Thr Gly
    450                   455                   460
Gln Leu Glu Tyr Lys Glu Gln Ser Leu Leu Gln Pro Pro Thr Leu Gln
```

```
465                     470                     475                     480
Leu Leu Asn Gly Met Gly Pro Leu Gly Arg Arg Ala Ser Asp Gly Gly
            485                     490                     495
Ala Asn Ile Gln Leu His Ala Gln Gln Leu Leu Lys Arg Pro Arg Gly
        500                     505                     510
Pro Ser Pro Leu Val Thr Met Thr Pro Ala Val Pro Ala Val Thr Pro
    515                     520                     525
Val Asp Glu Glu Ser Ser Asp Gly Glu Pro Asp Gln Glu Ala Val Gln
    530                     535                     540
Ser Ser Thr Tyr Lys Asp Ser Asn Thr Leu His Leu Pro Thr Glu Arg
545                     550                     555                     560
Phe Ser Pro Val Arg Arg Phe Ser Asp Gly Ala Ala Ser Ile Glu Ala
            565                     570                     575
Phe Lys Ala His Leu Glu Lys Met Gly Asn Asn Ser Ser Ile Lys Gln
        580                     585                     590
Leu Gln Gln Glu Cys Glu Gln Leu Gln Lys Met Tyr Gly Gly Gln Ile
    595                     600                     605
Asp Glu Arg Thr Leu Glu Lys Thr Gln Gln Gln His Met Leu Tyr Gln
    610                     615                     620
Gln Glu Gln His His Gln Ile Leu Gln Gln Gln Ile Gln Asp Ser Ile
    630                     635                     640
Cys Pro Pro Gln Pro Ser Pro Pro Leu Gln Ala Ala Cys Glu Asn Gln
            645                     650                     655
Pro Ala Leu Leu Thr His Gln Leu Gln Arg Leu Arg Ile Gln Pro Ser
        660                     665                     670
Ser Pro Pro Pro Asn His Pro Asn Asn His Leu Phe Arg Gln Pro Ser
    675                     680                     685
Asn Ser Pro Pro Pro Met Ser Ser Ala Met Ile Gln Pro His Gly Ala
    690                     695                     700
Ala Ser Ser Ser Gln Phe Gln Gly Leu Pro Ser Arg Ser Ala Ile Phe
705                     710                     715                     720
Gln Gln Gln Pro Glu Asn Cys Ser Ser Pro Pro Asn Val Ala Leu Thr
            725                     730                     735
Cys Leu Gly Met Gln Gln Pro Ala Gln Ser Gln Gln Val Thr Ile Gln
        740                     745                     750
Val Gln Glu Pro Val Asp Met Leu Ser Asn Met Pro Gly Thr Ala Ala
    755                     760                     765
Gly Ser Ser Gly Arg Gly Ile Ser Ile Ser Pro Ser Ala Gly Gln Met
    770                     775                     780
Gln Met Gln His Arg Thr Asn Leu Met Ala Thr Leu Ser Tyr Gly His
785                     790                     795                     800
Arg Pro Leu Ser Ser Lys Gln Leu Ser Ala Asp Ser Ala Glu Ala His Ser
            805                     810                     815
Leu Asn Val Asn Arg Phe Ser Pro Ala Asn Tyr Asp Gln Ala His Leu
        820                     825                     830
His Pro His Leu Phe Ser Asp Gln Ser Arg Gly Ser Pro Ser Ser Tyr
        835                     840                     845
Ser Pro Ser Thr Gly Val Gly Phe Ser Pro Thr Gln Ala Leu Lys Val
    850                     855                     860
Pro Pro Leu Asp Gln Phe Pro Thr Phe Pro Pro Ser Ala His Gln Gln
865                     870                     875                     880
Pro Pro His Tyr Thr Thr Ser Ala Leu Gln Gln Ala Leu Leu Ser Pro
            885                     890                     895
Thr Pro Pro Asp Tyr Thr Arg His Gln Gln Val Pro His Ile Leu Gln
```

```
              900                 905                 910
Gly Leu Leu Ser Pro Arg His Ser Leu Thr Gly His Ser Asp Ile Arg
        915                 920                 925
Leu Pro Pro Thr Glu Phe Ala Gln Leu Ile Lys Arg Gln Gln Gln Gln
    930                 935                 940
Arg Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Glu Tyr Gln Glu Leu
945                 950                 955                 960
Phe Arg His Met Asn Gln Gly Asp Ala Gly Ser Leu Ala Pro Ser Leu
                965                 970                 975
Gly Gly Gln Ser Met Thr Glu Arg Gln Ala Leu Ser Tyr Gln Asn Ala
            980                 985                 990
Asp Ser Tyr His His Thr Ile Gln Asn Ser Asp Asp Ala Tyr Val Gln
        995                 1000                1005
Leu Asp Asn Leu Pro Gly Met Ser Leu Val Ala Gly Lys Ala Leu Ser
    1010                1015                1020
Ser Ala Arg Met Ser Asp Ala Val Leu Ser Gln Ser Ser Leu Met Gly
1025                1030                1035                1040
Ser Gln Gln Phe Gln Asp Gly Glu Asn Glu Glu Cys Gly Ala Ser Leu
                1045                1050                1055
Gly Gly His Glu His Pro Asp Leu Ser Asp Gly Ser Gln His Leu Asn
            1060                1065                1070
Ser Ser Cys Tyr Pro Ser Thr Cys Ile Thr Asp Ile Leu Leu Ser Tyr
        1075                1080                1085
Lys His Pro Glu Val Ser Phe Ser Met Glu Gln Ala Gly Val
    1090                1095                1100
```

```
<210> 6101
<211> 1447
<212> DNA
<213> Homo sapiens

<400> 6101
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60
ttattactgt acctaataaa cagcccagcg tggtgattcc tattcactta gtagcctccc
120
catctagaaa tatactccgt gatctttctt gatggccaga ctgtgtaaaa ttcatacagt
180
gtttactaca gggatcccca aatattgtta gttgaatgaa caaacacaca tttcaaggag
240
ggcactacag tgagtagatg aacagttttc tgataggaga ttgtacaagt aatgttttca
300
ccagtgtatt ttaggacagc agattcagat taatgcgctg ggactgaatg caaatagtaa
360
aattacaaat ataaagtaaa aatttggaac ctttgccaca gagaggaata ataaattgat
420
ttaataattt gaaagaactg taaggtttag gttttgttct tatttttagt gcgactgaga
480
ttggagtctg tttgtagaca tatctgaaaa aagtgaaggg ggagatggaa gatggtaaat
540
gccaaggaaa agatggaagg ataaatcagt gtaataaaaa ggagcacttc tttttcgcca
600
acagaagtaa aggtaaaggt taagtgtctg agttaacgaa tggattgttg acctctgggg
660
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agggtgctcc catcagctca gctttgtgac gacctaagaa tatcccttcc acacctttcc
720
tgatccaatc gttctggctg cataaaacca cctaaatcaa tcaactgtta cacttccctt
780
agtgctagga catattcata taactcccac gtattaaatg aaaatacatc catctaaaaa
840
taaaacaaca agattgctgc tacaccaaga aaggattta aaaaggcctg ttcacaagct
900
aagtgagggc cagaggaaag gtgttcgttt aaactgaaat tcgagctgcg ataacacctc
960
ctaatgcaat caaacgctgt tgcagcacac ttcttaggag atcgggttca acggcaggga
1020
ttgggtaagg tgagaatctg gcttggcggc tccggccccg gccatctggt tccctggggc
1080
tccggccgcc accatccact cgacggctct cggcccgaac gcttggtcgc accgcctgcc
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1200
ccaacgctga cgcccgcggt ctgaggtcgc catgggaaga gcggtaggcc accctgctcc
1260
tctgatcacc ggaggacagg gacacattgt tcagggccat attcaaacac tgcccgcagt
1320
acttgcgtta cgtcccctttg tgaaggcagg cccttcgcgg ctcccagat cagtccagcc
1380
tgtgtcggac ccgatgacta agcacacagg aacccataac tgagctgcgg aagagccaga
1440
agccgcc
1447
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```
<210> 6102
<211> 123
<212> PRT
<213> Homo sapiens

<400> 6102
Met Ala Leu Asn Asn Val Ser Leu Ser Ser Gly Asp Gln Arg Ser Arg
1               5                   10                  15
Val Ala Tyr Arg Ser Ser His Gly Asp Leu Arg Pro Arg Ala Ser Ala
            20                  25                  30
Leu Ala Met Val Ser Gly Asp Gly Phe Leu Val Ser Arg Pro Glu Ala
        35                  40                  45
Ile His Leu Gly Pro Arg Gln Ala Val Arg Pro Ser Val Arg Ala Glu
    50                  55                  60
Ser Arg Arg Val Asp Arg Gly Gly Arg Ser Pro Arg Glu Pro Asp Gly
65                  70                  75                  80
Arg Gly Arg Ser Arg Gln Ala Arg Phe Ser Pro Tyr Pro Ile Pro Ala
                85                  90                  95
Val Glu Pro Asp Leu Leu Arg Ser Val Leu Gln Gln Arg Leu Ile Ala
            100                 105                 110
Leu Gly Gly Val Ile Ala Ala Arg Ile Ser Val
        115                 120
```

```
<210> 6103
<211> 309
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<212> DNA
<213> Homo sapiens

<400> 6103
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ctactgcttc ggccaggttg ccacagccac tgatgagaga cagctccagc cacaatggac
120
agaacctatg ccttgatgaa gaagattggg cagtccccag tgagagtcct gaaggagatt
180
gacggcttcg tcctgaaccg cctgcagtac gccgtcatca gtgaggcctg gagactggtg
240
gaggaagaaa tagtatctcc tagcgaccta gacctggtca tgtcagacgg gctgggcatg
300
cggtacgcg
309

<210> 6104
<211> 71
<212> PRT
<213> Homo sapiens

<400> 6104
Glu Thr Ala Pro Ala Thr Met Asp Arg Thr Tyr Ala Leu Met Lys Lys
1   5   10   15
Ile Gly Gln Ser Pro Val Arg Val Leu Lys Glu Ile Asp Gly Phe Val
                20   25   30
Leu Asn Arg Leu Gln Tyr Ala Val Ile Ser Glu Ala Trp Arg Leu Val
        35   40   45
Glu Glu Glu Ile Val Ser Pro Ser Asp Leu Asp Leu Val Met Ser Asp
    50   55   60
Gly Leu Gly Met Arg Tyr Ala
65   70

<210> 6105
<211> 1846
<212> DNA
<213> Homo sapiens

<400> 6105
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60
caggggccag aaccggggat gccccccaac cctatgaact caacacagcc atcaactgca
120
gggatgaagt ggtgtctccc cttccatctg ctctgcaggg gtccctcagg ctccctatca
180
gcccctccag ctgcctcagt tatctctgca cccccatctt cctcctcccg acatcgcaaa
240
cgtcgcagga cttccagcaa gtcggaggca ggggctaggg gtggaggcca gggttccaag
300
gaaaagggcc gagggagttg gggaggccgc caccaccacc accacccact gcctgcagca
360
ggcttcaaaa agcaacagcg caagttccag tatgggaatt attgcaaata ctatgggtac
420

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cgcaatcctt cctgtgagga tgggcgcctt cgggtgttga agcctgagtg gtttcggggc
480
cgggacgtcc tagatctggg ctgcaatgtg ggccatctga ccctgagcat tgcctgcaag
540
tggggcccgt cccgcatggt gggcctggat atcgattccc ggctcatcca ttctgcccgc
600
caaaacatcc gacactacct ttccgaggag ctgcgtctcc caccccagac tttggaaggg
660
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720
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780
gacacatcag tcttccccaa caatgttgtc ttcgtcacgg gtaattatgt gctggatcga
840
gatgacctgg tggaggccca aacacctgag tatgatgtgg tgctctgcct cagcctcacc
900
aagtgggtgc atctgaactg gggagacgag ggcctgaagc gcatgtttcg ccggatctac
960
cggcacctac gccctggggg catcctggtc ctagagcccc aaccctggtc gtcgtatggc
1020
aagagaaaga ctcttacaga aacgatctac aagaactact accgaatcca attgaagcca
1080
gagcagttca gttcctacct gacatcccca gacgtgggct tctccagcta tgagcttgtg
1140
gccacacccc acaacacctc taaaggcttc cagcgtcctg tgtacctgtt ccacaaggcc
1200
cgatcccca gccactaagt ggcccctaa acagaaagtg tgaagaggct gccctcgctg
1260
ctcataagga cctgggggaa gaggaaagtg tcccaaggtc tttccttct gactccaaaa
1320
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1380
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1500
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1560
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1620
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1680
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1740
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1800
aaaaaaaa aaaaaaaa aaaaaaaa aaaaaaaa aaaaa
1846


<210> 6106
<211> 405
<212> PRT
<213> Homo sapiens
```

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<400> 6106
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Ala Ala Ala Ala Gln Gly Pro Glu Pro Gly Met Pro Pro Asn Pro Met
            20                  25                  30
Asn Ser Thr Gln Pro Ser Thr Ala Gly Met Lys Trp Cys Leu Pro Phe
        35                  40                  45
His Leu Leu Cys Arg Gly Pro Ser Gly Ser Leu Ser Ala Pro Pro Ala
    50                  55                  60
Ala Ser Val Ile Ser Ala Pro Pro Ser Ser Ser Ser Arg His Arg Lys
65                  70                  75                  80
Arg Arg Arg Thr Ser Ser Lys Ser Glu Ala Gly Ala Arg Gly Gly Gly
                85                  90                  95
Gln Gly Ser Lys Glu Lys Gly Arg Gly Ser Trp Gly Gly Arg His His
            100                 105                 110
His His His Pro Leu Pro Ala Ala Gly Phe Lys Lys Gln Gln Arg Lys
        115                 120                 125
Phe Gln Tyr Gly Asn Tyr Cys Lys Tyr Tyr Gly Tyr Arg Asn Pro Ser
    130                 135                 140
Cys Glu Asp Gly Arg Leu Arg Val Leu Lys Pro Glu Trp Phe Arg Gly
145                 150                 155                 160
Arg Asp Val Leu Asp Leu Gly Cys Asn Val Gly His Leu Thr Leu Ser
                165                 170                 175
Ile Ala Cys Lys Trp Gly Pro Ser Arg Met Val Gly Leu Asp Ile Asp
            180                 185                 190
Ser Arg Leu Ile His Ser Ala Arg Gln Asn Ile Arg His Tyr Leu Ser
        195                 200                 205
Glu Glu Leu Arg Leu Pro Pro Gln Thr Leu Glu Gly Asp Pro Gly Ala
    210                 215                 220
Glu Gly Glu Glu Gly Thr Thr Thr Val Arg Lys Arg Ser Cys Phe Pro
225                 230                 235                 240
Ala Ser Leu Thr Ala Ser Arg Gly Pro Ile Ala Ala Pro Gln Val Pro
                245                 250                 255
Leu Asp Gly Ala Asp Thr Ser Val Phe Pro Asn Asn Val Val Phe Val
            260                 265                 270
Thr Gly Asn Tyr Val Leu Asp Arg Asp Asp Leu Val Glu Ala Gln Thr
        275                 280                 285
Pro Glu Tyr Asp Val Val Leu Cys Leu Ser Leu Thr Lys Trp Val His
    290                 295                 300
Leu Asn Trp Gly Asp Glu Gly Leu Lys Arg Met Phe Arg Arg Ile Tyr
305                 310                 315                 320
Arg His Leu Arg Pro Gly Gly Ile Leu Val Leu Glu Pro Gln Pro Trp
                325                 330                 335
Ser Ser Tyr Gly Lys Arg Lys Thr Leu Thr Glu Thr Ile Tyr Lys Asn
            340                 345                 350
Tyr Tyr Arg Ile Gln Leu Lys Pro Glu Gln Phe Ser Ser Tyr Leu Thr
        355                 360                 365
Ser Pro Asp Val Gly Phe Ser Ser Tyr Glu Leu Val Ala Thr Pro His
    370                 375                 380
Asn Thr Ser Lys Gly Phe Gln Arg Pro Val Tyr Leu Phe His Lys Ala
385                 390                 395                 400
Arg Ser Pro Ser His
                405
```

```
<210> 6107
<211> 896
<212> DNA
<213> Homo sapiens

<400> 6107
nnaaatttga cccgcacagt gatgaggcca gggctgggag ggaggcaggg tctatcctca
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gatctcaggg gggcctctgg actgctgctg cctgcacctg cttgtctttt gggcaggcct
120
tggatgtcaa ggagatgctc aaggctgggc tcaacaccac cccagcctcc agcctcccca
180
gtggagtctc cccgaccttc acccgcctct tcagccttct catcattacc ctctgatgga
240
tgggggagtt cagttggctc ggggttgcct tggcctgcca ccaggtggtc cacatgcccc
300
aggtggagga cggatgtgtc gcctgctgac acaatagcgc ccaggagctg gttgctaccg
360
ctgtctgcta cgtaggtaga gagccaagct aggaccaagg ctagaatcag caccaccaca
420
cctgccacca ccatcacctc attacccaca ccctcaatga gggtgacatc agtgaccccc
480
ttagccgacc ctactcctca ctggccggga caactggtct tatcacggag gctgggggca
540
ggcagccctt cggttcgggt gggcccagac cccagtccaa cgccgaggga ataggaccat
600
ccaaaagcgg aaccttcgcc tcagaaaaag ggtgcgggac ccctcctcac cgtgcggtca
660
cggtacggac agggtagatc acaggctgag ggacagagca aagacccctg aggccggaca
720
cctgggggtcc tgccggggccc ctccccacga gagttccctg tgtctgtgcc aatcgttttc
780
gtctttcttt gccgcagttt cttttcctgt aaatcatggt taatgacatt aaccttctta
840
ccatcagggg ttagttgtgg ttgtgataaa taattactac cgttattaag caattg
896

<210> 6108
<211> 124
<212> PRT
<213> Homo sapiens

<400> 6108
Xaa Asn Leu Thr Arg Thr Val Met Arg Pro Leu Gly Gly Arg Gln
1               5                   10                  15
Gly Leu Ser Ser Asp Leu Arg Gly Ala Ser Gly Leu Leu Leu Pro Ala
            20                  25                  30
Pro Ala Cys Leu Leu Gly Arg Pro Trp Met Ser Arg Arg Cys Ser Arg
        35                  40                  45
Leu Gly Ser Thr Pro Pro Ala Pro Ala Ser Pro Val Glu Ser Pro
    50                  55                  60
Arg Pro Ser Pro Ala Ser Ser Ala Phe Ser Ser Leu Pro Ser Asp Gly
65                  70                  75                  80
Trp Gly Ser Ser Val Gly Ser Gly Leu Pro Trp Pro Ala Thr Arg Trp
```

```
                    85                  90                  95
Ser Thr Cys Pro Arg Trp Arg Thr Asp Val Ser Pro Ala Asp Thr Ile
             100                 105                 110
Ala Pro Arg Ser Trp Leu Leu Pro Leu Ser Ala Thr
         115                 120
```

```
<210> 6109
<211> 2087
<212> DNA
<213> Homo sapiens
```

```
<400> 6109
aggccggaag cgcgcggaga ccatgtagtg agaccctcgc gaggtctgag agtcactgga
60
gctaccagaa gcatcatggg gccctgggga gagccagagc tcctggtgtg gcgcccccgag
120
ggtagcttca gagcctccag tgcctgtggg gctggaggtg aagttggggg ccctggtgct
180
gctgctggtc tcaccctcct ctgcagcctg gtgcccatct gtgtgctgcg ccggccagga
240
gctaaccatg aaggctcagc ttcccgccag aaagccctga gcctagtaag ctgtttcgcg
300
gggggcgtct ttttggccac ttgtctcctg gacctgctgc ctgactacct ggctgccata
360
gatgaggccc tggcagcctt gcacgtgacg ctccagttcc cactgcaaga gttcatcctg
420
gccatgggct tcttcctggt cctggtgatg gagcagatca cactggctta caaggagcag
480
tcagggccgt cacctctgga ggaaacaagg gctctgctgg gaacagtgaa tggtgggccg
540
cagcattggc atgatgggcc aggggtccca caggcgagtg gagcccccagc aacccctca
600
gccttgcgtg cctgtgtact ggtgttctcc ctggccctcc actccgtgtt cgaggggctg
660
gcggtagggc tgcagcgaga ccgggctcgg gccatggagc tgtgcctggc tttgctgctc
720
cacaagggca tcctggctgt cagcctgtcc ctgcggctgt tgcagagcca ccttagggca
780
caggtggtgg ctggctgtgg gatcctcttc tcatgcatga cacctctagg catcgggctg
840
ggtgcagctc tggcagagtc ggcaggacct ctgcaccagc tggcccagtc tgtgctagag
900
ggcatggcag ctggcacctt tctctatatc acctttctgg aaatcctgcc ccaggagctg
960
gccagttctg agcaaaggat cctcaaggtc attctgctcc tagcaggctt tgccctgctc
1020
actggcctgc tcttcatcca aatctagggg gcttcaagag aggggcaggg gagattgatg
1080
atcaggtgcc cctgttctcc cttccctccc ccagttgtgg ggaataggaa ggaaaggga
1140
agggaaatac tgaggaccaa aaagttctct gggagctaaa gatagagcct ttggggctat
1200
ctgactaatg agaggggaagt gggcagacaa gaggctggcc ccagtcccaa ggaacaagag
1260
```

```
atggtcaagt cgctagagac atatcagggg acattaggat tggggaagac acttgactgc
1320
tagaatcaga ggttggacac tatacataag gacaggctca catgggaggc tggaggtggg
1380
tacccagctg ctgtggaacg ggtatggaga ggtcatacaaac ctagagtcag tgtcctgttg
1440
gtcctagccc atttcagcac cctgccactt ggagtggacc cctcctactc ttcttagcgc
1500
ctaccctcat acctatctcc ctcctcccat ctcctagggg actggcgcca aatggtctct
1560
ccctgccaat tttggtatct tctctggcct ctccagtcct gcttactcct ctattttaa
1620
agtgccaaac aaatcccctt cctctttctc aaagcacagt aatgtggcac tgagccctac
1680
ccagcacctc agtgaagggg gcctgcttgc tcttttatttt ggtcccggat cctggggtgg
1740
ggcagaaata ttttctgggc tggggtagga ggaaggttgt tgcagccatc tactgctgct
1800
gtaccctagg aatatgggga catggacatg gtgtcccatg cccagatgat aaacactgag
1860
ctgccaaaac atttttttaa atacacccga ggagcccaag ggggaagggc aatgcctacc
1920
cccagcgtta ttttttgggga gggagggctg tgcatagaga catattcttt agaatctatt
1980
ttattaactg acctgttttg ggacctgtta cccaaataaa agatgtttct agacatctgt
2040
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa
2087
```

```
<210> 6110
<211> 323
<212> PRT
<213> Homo sapiens
```

```
<400> 6110
Met Gly Pro Trp Gly Glu Pro Glu Leu Leu Val Trp Arg Pro Glu Gly
1               5                   10                  15
Ser Phe Arg Ala Ser Ser Ala Cys Gly Ala Gly Gly Glu Val Gly Gly
            20                  25                  30
Pro Gly Ala Ala Ala Gly Leu Thr Leu Leu Cys Ser Leu Val Pro Ile
        35                  40                  45
Cys Val Leu Arg Arg Pro Gly Ala Asn His Glu Gly Ser Ala Ser Arg
    50                  55                  60
Gln Lys Ala Leu Ser Val Ser Cys Phe Ala Gly Gly Val Phe Leu
65                  70                  75                  80
Ala Thr Cys Leu Leu Asp Leu Leu Pro Asp Tyr Leu Ala Ala Ile Asp
                85                  90                  95
Glu Ala Leu Ala Ala Leu His Val Thr Leu Gln Phe Pro Leu Gln Glu
            100                 105                 110
Phe Ile Leu Ala Met Gly Phe Phe Leu Val Leu Val Met Glu Gln Ile
        115                 120                 125
Thr Leu Ala Tyr Lys Glu Gln Ser Gly Pro Ser Pro Leu Glu Glu Thr
    130                 135                 140
Arg Ala Leu Leu Gly Thr Val Asn Gly Gly Pro Gln His Trp His Asp
```

```
145                    150                    155                    160
Gly Pro Gly Val Pro Gln Ala Ser Gly Ala Pro Ala Thr Pro Ser Ala
                    165                    170                    175
Leu Arg Ala Cys Val Leu Val Phe Ser Leu Ala Leu His Ser Val Phe
                180                    185                    190
Glu Gly Leu Ala Val Gly Leu Gln Arg Asp Arg Ala Arg Ala Met Glu
            195                    200                    205
Leu Cys Leu Ala Leu Leu Leu His Lys Gly Ile Leu Ala Val Ser Leu
        210                    215                    220
Ser Leu Arg Leu Leu Gln Ser His Leu Arg Ala Gln Val Val Ala Gly
225                    230                    235                    240
Cys Gly Ile Leu Phe Ser Cys Met Thr Pro Leu Gly Ile Gly Leu Gly
                245                    250                    255
Ala Ala Leu Leu Glu Ser Ala Gly Pro Leu His Gln Leu Ala Gln Ser
            260                    265                    270
Val Leu Glu Gly Met Ala Ala Gly Thr Phe Leu Tyr Ile Thr Phe Leu
        275                    280                    285
Glu Ile Leu Pro Gln Glu Leu Ala Ser Ser Glu Gln Arg Ile Leu Lys
        290                    295                    300
Val Ile Leu Leu Leu Ala Gly Phe Ala Leu Leu Thr Gly Leu Leu Phe
305                    310                    315                    320
Ile Gln Ile


<210> 6111
<211> 1706
<212> DNA
<213> Homo sapiens

<400> 6111
nnagatctgc ctgcctctct gcccccaaag tggtgggatt acaggtgtga gccactgctc
60
ccagccaaga aattctttat atgtagatac tattttcttg tcaagttcag atgttggaaa
120
taacttgcca tttgttcatt cttgtctttg ttgtttttca tataataagaa atcccccaa
180
tgtttatat cttttatgtc tttattttgt tttgtttttgt ttttgagatg gagtttccct
240
cttgttgccc aggctggagt gnagtggcac agtctcggct cactgcaacc tccacttcct
300
gggttcaagc agttctcgtg ccgcagcctc ccaagtagct gggactacag gcatgcgcca
360
ccacgccagg ctaattttg tattttttagt agagatgggg tttcaccatg ttggccgggc
420
tggtctcaaa ctcctgacct caggcgatcc acccacctca gcgtcccaaa gtgctgggat
480
tataggcgtg agccaccgca cctggcctat gagtggtctt ttaattagga acaaatctaa
540
tggaaaggag agttgactga agttggccca caggattgtg agctgggcag tgccttcatg
600
aaggcttgcc accttgggac gccccagttt actggggtgt cttgcggagt gcagaaggct
660
ttctggcagc tgcctgggtt tggccagacc ctgcctcccc tcccgccggc caaccctag
720
```

```
tccccttcct gtctccactt gcattcaggg gtggctgctg ttctgagaac attagaactg
780
ggaagagaga tggagtcaca tggattttg gtgggcatta ttctgaactt tcgtatccaa
840
gttagtcccc cttattccac tgtggcattg ccgttctaag cagttacctg atgcctgctg
900
ctgaagagct gctcacagga ggcggcggcg gccctggcac tgccccttgc attaggtctt
960
gtgtttgatg tgttcttgtg aatttacttt gtcagaacaa aatatttacg cgttgggttc
1020
aggaattct tttagctccc catctgctg tgaaattcag gaaacctccc gttgcctagt
1080
aatcaccca tgtaggtgta cattgtgaca aagtgcatct gaccactaag gggcccctt
1140
ggtgaccca gcacattcac agcagtgtta aaatggcctg cattttggag atgctggctg
1200
gcctttcagt gcctcccagg aagacacatg gcctttcct cttcagatgc ctgaagggag
1260
tgctttgagg caggtgatgt gctgggagtg tgggcggcct ccctctggcc ccggggcct
1320
ctgtggacct tggctccctc cgtggacctg ggcttcgtgg tgagcactgc agcctccctg
1380
ggcattcct ccagcgccag caccactgca acatatagac ctgagtgcta ttgtattttg
1440
gcttggtgtg tatgctcttc attgtgtaaa attgctgttc ttttgacaat ttaagtgatt
1500
gttttgttta ctgtaagttt gaaaataaaa atgaagaaaa aaaattccaa tgactgtgct
1560
gtggttggag actttattta ccaagatgtt tactcttcct ttccccttcc attttgagga
1620
gctgtgtcac tcctcctccc ccccagtgct ttgtagtctc tcctatgtca taataaagct
1680
acattttctc tgaaaaaaaa aaaaaa
1706
```

<210> 6112
<211> 110
<212> PRT
<213> Homo sapiens

<400> 6112
```
Met Ser Leu Phe Cys Phe Val Leu Phe Leu Arg Trp Ser Phe Pro Leu
 1               5                  10                  15
Val Ala Gln Ala Gly Val Xaa Trp His Ser Leu Gly Ser Leu Gln Pro
                20                  25                  30
Pro Leu Pro Gly Phe Lys Gln Phe Ser Cys Arg Ser Leu Pro Ser Ser
        35                  40                  45
Trp Asp Tyr Arg His Ala Pro Pro Arg Gln Ala Asn Phe Cys Ile Phe
50                  55                  60
Ser Arg Asp Gly Val Ser Pro Cys Trp Pro Gly Trp Ser Gln Thr Pro
65                  70                  75                  80
Asp Leu Arg Arg Ser Thr His Leu Ser Val Pro Lys Cys Trp Asp Tyr
                85                  90                  95
Arg Arg Glu Pro Pro His Leu Ala Tyr Glu Trp Ser Phe Asn
```

                    100   105   110

<210> 6113
<211> 1095
<212> DNA
<213> Homo sapiens

<400> 6113
nncggccgcc aagcgatccc tgctccgcgc gacactgcgt gcccgcgcac gcagagaggc
60
ggtgacgcac tttacggcgg cagcgtaagt gcgtgacgct cgtcagtggc ttcagttcac
120
acgtggcgcc agcggaggca ggttgatgtg tttgtgcttc cttctacagc caatatgaaa
180
aggcctagta agtggggtcg ggaggcgggc gtggagggac ccacgtctgg aagttgctgc
240
agccaccacg acgctcttct acggctacgg ctttgtctct gctggtatgg gggtgggagc
300
atacgcgtag gccttggccc tatttcctgg tagaaccgag agttggaagt ccctacggcg
360
atcatgttaa ccgcgcgggc tcattctgcg gaacgaagcc gggcagaggg tggggaagac
420
taggctagat tttcgtaagg aagcagcgtc tgagccaggt ttgaggccca atattttctt
480
tccgtggcca cgtgcagact ggcccaggtg agagctgaga atcgcctccc agactcagtg
540
ttcctctcct gccttatgat tcgtgctgtt tgacacgaag tggttgtcgt tttgtgtctc
600
atacgctgtt gtgtatgatc ccattctaat attgtgaggg taagtgcagg gaattttgac
660
tccattctgg atctactgaa tttaattctc tgggatttga aagtagcacg tatgtttgca
720
ttaggcattt cgcattagac ttaacgttag gtttggtagc caataacaca agaaaaggat
780
ataactccat agtgcgttaa cccagaacta atcatttggg ttaacagatt tgtgatgtgt
840
ttctttgtag agttaaagaa agcaagtaaa cgcatgacct gccataagcg gtataaaatc
900
caaaaaaagg ttcgagaaca tcatcgaaaa ttaagaaagg aggctaaaaa gcggggtcac
960
aagaagccta ggaaagaccc aggagttcca aacagtgctc cctttaagga ggctcttctt
1020
gaggaagctg agctaaggaa acagaggctt gaagaactaa aacagcagca gaaacttgac
1080
aggcagaagg aacta
1095

<210> 6114
<211> 87
<212> PRT
<213> Homo sapiens

<400> 6114
Met Cys Phe Phe Val Glu Leu Lys Lys Ala Ser Lys Arg Met Thr Cys

```
1                  5                   10                  15
His Lys Arg Tyr Lys Ile Gln Lys Lys Val Arg Glu His His Arg Lys
             20                  25                  30
Leu Arg Lys Glu Ala Lys Lys Arg Gly His Lys Lys Pro Arg Lys Asp
          35                  40                  45
Pro Gly Val Pro Asn Ser Ala Pro Phe Lys Glu Ala Leu Leu Glu Glu
       50                  55                  60
Ala Glu Leu Arg Lys Gln Arg Leu Glu Glu Leu Lys Gln Gln Lys
65                  70                  75                  80
Leu Asp Arg Gln Lys Glu Leu
             85
```

```
<210> 6115
<211> 411
<212> DNA
<213> Homo sapiens
```

```
<400> 6115
gcgcgcctgg ccccgccagg  gcctaagttc cctgcactcg cttccccgcc tgtcgccgcc
60
gccgcgcccc gcagccctcc ttctcgtggg cgctggggaa gaaactcgtc ggcgggtcta
120
actgtggcgt cccagggcgg tggagggagc aacttcgggg gcacgtcctc gtaaatcccg
180
tggaggacac tgaccctgta ccccaccctc gaggccagaa gtcggttcct ttgggggaac
240
tgaggggcga gagcactcgc ccccctgact tgcaaagttg gcgtctttac ttggcctccg
300
ggattctgcg catggcgtgt ctccaggctg ctgatgggca agacagatgt gccaggtcca
360
gaatgaactt gagaagagtt tgtagccatt cctgaatcac cttatactag t
411
```

```
<210> 6116
<211> 129
<212> PRT
<213> Homo sapiens
```

```
<400> 6116
Met Ala Thr Asn Ser Ser Gln Val His Ser Gly Pro Gly Thr Ser Val
 1                  5                   10                  15
Leu Pro Ile Ser Ser Leu Glu Thr Arg His Ala Gln Asn Pro Gly Gly
             20                  25                  30
Gln Val Lys Thr Pro Thr Leu Gln Val Arg Gly Ala Ser Ala Leu Ala
          35                  40                  45
Pro Gln Phe Pro Gln Arg Asn Arg Leu Leu Ala Ser Arg Val Gly Tyr
       50                  55                  60
Arg Val Ser Val Leu His Gly Ile Tyr Glu Asp Val Pro Pro Lys Leu
65                  70                  75                  80
Leu Pro Pro Pro Pro Trp Asp Ala Thr Val Arg Pro Ala Asp Glu Phe
                85                  90                  95
Leu Pro Gln Arg Pro Arg Glu Gly Gly Leu Arg Ala Ala Ala Ala Ala
                100                 105                 110
Thr Gly Gly Glu Ala Ser Ala Gly Asn Leu Gly Pro Gly Gly Ala Arg
```

```
          115                    120                    125
Arg


<210> 6117
<211> 962
<212> DNA
<213> Homo sapiens

<400> 6117
cttccgcctt cccaagcca acgtctccgc cgtcggctcc gcggcgccgc catggccgac
60
gtggaagacg gagaggaaac ctgcgccctg gcctctcact ccgggagctc aggctccaag
120
tcgggaggcg acaagatgtt ctccctcaag aagtggaacg cggtggccat gtggagctgg
180
gacgtggagt gcgatacgtg cgccatctgc agggtccagg tgatggatgc ctgtcttaga
240
tgtcaagctg aaaacaaaca agaggactgt gttgtggtct ggggagaatg taatcattcc
300
ttccacaact gctgcatgtc cctgtgggtg aaacagaaca atcgctgccc tctctgccag
360
caggactggg tggtccaaag aatcggcaaa tgagagtggt tagaaggctt cttagcgcag
420
ttgttcagag ccctggtgga tcttgtaatc cagtgcccta caaaggctag aacactacag
480
gggatgaatt cttcaaatag gagccgatgg atctgtggtc ctttgggact catccaaagcc
540
ttggtttagc attttgtcag ttttatcttc agaaattctc tgcgattaag aagataattt
600
attaaaggtg gtccttccta cctctgtggt gtgtgtcgcg cacacagctt agaagtgcta
660
taaaaaagga aagagctcca aattgaatca cctttataat ttacccattt ctatacaaca
720
ggcagtggaa gcagtttcag agaacttttt gcatgcttat ggttgatcag ttaaaaaaga
780
atgttacagt aacaaataaa gtgcagttta aaacccaact cttactctta atttgttcct
840
aatacgtatt tttggcaggg agagggaacg gtccatgaaa tctttatgtg atataaggat
900
tttaagtttg ggccagtgaa cagggtaaat aaaatttaac ttttgagcat aaaaaaaaaa
960
aa
962


<210> 6118
<211> 113
<212> PRT
<213> Homo sapiens

<400> 6118
Met Ala Asp Val Glu Asp Gly Glu Glu Thr Cys Ala Leu Ala Ser His
 1               5                  10                  15
Ser Gly Ser Ser Gly Ser Lys Ser Gly Gly Asp Lys Met Phe Ser Leu
```

```
              20                    25                     30
Lys Lys Trp Asn Ala Val Ala Met Trp Ser Trp Asp Val Glu Cys Asp
         35                    40                     45
Thr Cys Ala Ile Cys Arg Val Gln Val Met Asp Ala Cys Leu Arg Cys
    50                    55                     60
Gln Ala Glu Asn Lys Gln Glu Asp Cys Val Val Val Trp Gly Glu Cys
65                    70                     75                    80
Asn His Ser Phe His Asn Cys Cys Met Ser Leu Trp Val Lys Gln Asn
                   85                    90                     95
Asn Arg Cys Pro Leu Cys Gln Gln Asp Trp Val Val Gln Arg Ile Gly
              100                   105                    110
Lys
```

```
<210> 6119
<211> 375
<212> DNA
<213> Homo sapiens

<400> 6119
accggttgac aacctcccta tggggaagct agatacagcc ccatggacat gccccactga
60
ccccacacc ccacacggac tgcacggaaa tatcacagta accatctctc agtcacagcg
120
tggccccaca gaactcatgc ctgcttgctt taaacccacc aatgaaaact ccccatggga
180
aacctgcttg gataatactt tggaccccaa taaatgcttt aatcccacaa gtcctctgtc
240
tctgcctctc tcttgcccct acccactggt tgagcatgtg tgtcccaaac ggccctgcaa
300
ggtgtgctgc cctgttcttt ctgggctctg tcaaggaatc aaactgcttc tgttatgtga
360
tgtgtcatgt tgtgc
375
```

```
<210> 6120
<211> 118
<212> PRT
<213> Homo sapiens

<400> 6120
Met Gly Lys Leu Asp Thr Ala Pro Trp Thr Cys Pro Thr Asp Pro His
1                   5                    10                    15
Thr Pro His Gly Leu His Gly Asn Ile Thr Val Thr Ile Ser Gln Ser
              20                    25                    30
Gln Arg Gly Pro Thr Glu Leu Met Pro Ala Cys Phe Lys Pro Thr Asn
         35                    40                    45
Glu Asn Ser Pro Trp Glu Thr Cys Leu Asp Asn Thr Leu Asp Pro Asn
    50                    55                    60
Lys Cys Phe Asn Pro Thr Ser Pro Leu Ser Leu Pro Leu Ser Cys Pro
65                    70                    75                    80
Tyr Pro Leu Val Glu His Val Cys Pro Lys Arg Pro Cys Lys Val Cys
                   85                    90                    95
Cys Pro Val Leu Ser Gly Leu Cys Gln Gly Ile Lys Leu Leu Leu Leu
```

```
              100                 105                 110
Cys Asp Val Ser Cys Cys
         115


<210> 6121
<211> 1039
<212> DNA
<213> Homo sapiens

<400> 6121
gacggaacgg cggtggtggc ccgcggaccg gacggggcac tatgaacgaa gaggagcagt
60
ttgtaaacat tgatttgaat gatgacaaca tttgcagtgt ttgtaaactg ggaacagaca
120
aagaaacact ctccttctgc cacatttgtt ttgagctaaa tattgagggg gtaccaaagt
180
ctgatctctt gcacaccaaa tcattaaggg gccataaaga ctgctttgaa aaataccatt
240
taattgcaaa ccagggttgt cctcgatcta agctttcaaa aagtacttat gaagaagtta
300
aaaccatttt gagtaagaag ataaactgga ttgtgcagta tgcacaaaat aaggatctgg
360
attcagattc tgaatgttct aaaaagcccc agcatcatct gtttaatttc aggcataagc
420
cagaagaaaa attactccca cagtttgagt cccaagtacc aaaatattct gcaaaatgga
480
tagatggaag tgcaggtggc atctctaact gtacacaaag aattttggag cagagggaaa
540
atacagactt tggactttct atgttacaag attcaggtgc cactttatgt cgtaacagtg
600
tattgtggcc tcatagtcac aaccaggcac agaaaaaaga agagacaatc tctagtccag
660
aggctaatgt ccagacccag catccacatt acagcagaga ggaataagtt tttgaagagt
720
taactcacca agtgcaagaa aaagattctt tggcctcaca gctccatgtc cgccacgttg
780
ccatcgaaca gcttctgaag aactgttcta agttaccatg tctgcaagta gggcgaacag
840
gaatgaagtc gcacctaccc ataaacaact gacctaaaca gacttacttc gtatgccctg
900
cccttttattg gtctcccaga catgcaaact ttgaagaagt ttgaagaaag ttgtggtccg
960
ttttttttatg gtcattaaat ttgccaaaca taaggcagta tttaacatct ttgtcaaata
1020
aagcagatca ttatactct
1039


<210> 6122
<211> 221
<212> PRT
<213> Homo sapiens

<400> 6122
Met Asn Glu Glu Glu Gln Phe Val Asn Ile Asp Leu Asn Asp Asp Asn
```

```
1                   5                   10                  15
Ile Cys Ser Val Cys Lys Leu Gly Thr Asp Lys Glu Thr Leu Ser Phe
                20                  25                  30
Cys His Ile Cys Phe Glu Leu Asn Ile Glu Gly Val Pro Lys Ser Asp
        35                  40                  45
Leu Leu His Thr Lys Ser Leu Arg Gly His Lys Asp Cys Phe Glu Lys
    50                  55                  60
Tyr His Leu Ile Ala Asn Gln Gly Cys Pro Arg Ser Lys Leu Ser Lys
65                  70                  75                  80
Ser Thr Tyr Glu Glu Val Lys Thr Ile Leu Ser Lys Lys Ile Asn Trp
                85                  90                  95
Ile Val Gln Tyr Ala Gln Asn Lys Asp Leu Asp Ser Asp Ser Glu Cys
            100                 105                 110
Ser Lys Lys Pro Gln His His Leu Phe Asn Phe Arg His Lys Pro Glu
        115                 120                 125
Glu Lys Leu Leu Pro Gln Phe Glu Ser Gln Val Pro Lys Tyr Ser Ala
    130                 135                 140
Lys Trp Ile Asp Gly Ser Ala Gly Gly Ile Ser Asn Cys Thr Gln Arg
145                 150                 155                 160
Ile Leu Glu Gln Arg Glu Asn Thr Asp Phe Gly Leu Ser Met Leu Gln
                165                 170                 175
Asp Ser Gly Ala Thr Leu Cys Arg Asn Ser Val Leu Trp Pro His Ser
            180                 185                 190
His Asn Gln Ala Gln Lys Lys Glu Glu Thr Ile Ser Ser Pro Glu Ala
        195                 200                 205
Asn Val Gln Thr Gln His Pro His Tyr Ser Arg Glu Glu
    210                 215                 220
```

```
<210> 6123
<211> 900
<212> DNA
<213> Homo sapiens

<400> 6123
ntgcatgcct gtataccaca gctactcggg aggctgaggc gggagaatcg cttgaaccca
60
ggaggcggag gttgcggtga gctgagatcg caccattgca ctccagcctg ggcaacaaga
120
gcgaaacaac aagagaaaaa aaaggaagct gccctctgcc caaaacccac gtcgaggtcc
180
ccaaacctgg gacccttagg tcttttctca cttagcgtgc ccaaccttct cctggcagga
240
aacaagcctc caggtctgct tccccgcaaa ggactataca tggcaaatga cttaaagctc
300
ctgagacacc atctccagat tcccatccac ttccccaagg atttcttgtc tgtgatgctt
360
gaaaaaggaa gtttgtctgc catgcgtttc ctcaccgccg tgaacttgga gcatccagag
420
atgctggaga aagcgtcccg ggagctgtgg atgcgcgtct ggtcaagggt gagtgtgggg
480
ctctgggaat cctctgggag gaccttggat gactttctga ccttccccag gcacgttttc
540
agggtcatga tcctgccccc gcccgggga tctactgtcc tcccagtcac acccctctcc
600
```

```
ccgcaccgcc ttcctgctgt cttctcttct tcccagaatg aagacatcac cgagccgcag
660
agcatcctgg cggctgcaga gaaggctggt atgtctgcag aacaagccca gggacttctg
720
gaaaagatcg caacgccaaa ggtgaagaac cagctcaagg agaccctga ggcagcctgc
780
agatacggag cctttgggct gcccatcacc gtggcccatg tggatggcca aacccacatg
840
ttatttggct ctgaccggat ggagctgctg gcgcacctgc tgggagagaa gtggatgggc
900
```

<210> 6124
<211> 300
<212> PRT
<213> Homo sapiens

<400> 6124

```
Xaa His Ala Cys Ile Pro Gln Leu Leu Gly Arg Leu Arg Arg Glu Asn
1                5                  10                  15
Arg Leu Asn Pro Gly Gly Gly Cys Gly Glu Leu Arg Ser His His
            20                  25                  30
Cys Thr Pro Ala Trp Ala Thr Arg Ala Lys Gln Gln Glu Lys Lys Lys
        35                  40                  45
Glu Ala Ala Leu Cys Pro Lys Pro Thr Ser Arg Ser Pro Asn Leu Gly
    50                  55                  60
Pro Leu Gly Leu Phe Ser Leu Ser Ser Val Pro Asn Leu Leu Leu Ala Gly
65                  70                  75                  80
Asn Lys Pro Pro Gly Leu Leu Pro Arg Lys Gly Leu Tyr Met Ala Asn
                85                  90                  95
Asp Leu Lys Leu Leu Arg His His Leu Gln Ile Pro Ile His Phe Pro
            100                 105                 110
Lys Asp Phe Leu Ser Val Met Leu Glu Lys Gly Ser Leu Ser Ala Met
        115                 120                 125
Arg Phe Leu Thr Ala Val Asn Leu Glu His Pro Glu Met Leu Glu Lys
    130                 135                 140
Ala Ser Arg Glu Leu Trp Met Arg Val Trp Ser Arg Val Ser Val Gly
145                 150                 155                 160
Leu Trp Glu Ser Ser Gly Arg Thr Leu Asp Asp Phe Leu Thr Phe Pro
                165                 170                 175
Arg His Val Phe Arg Val Met Ile Leu Pro Pro Pro Gly Leu Gly Ser Thr
            180                 185                 190
Val Leu Pro Val Thr Pro Leu Ser Pro His Arg Leu Pro Ala Val Phe
        195                 200                 205
Ser Ser Ser Gln Asn Glu Asp Ile Thr Glu Pro Gln Ser Ile Leu Ala
    210                 215                 220
Ala Ala Glu Lys Ala Gly Met Ser Ala Glu Gln Ala Gln Gly Leu Leu
225                 230                 235                 240
Glu Lys Ile Ala Thr Pro Lys Val Lys Asn Gln Leu Lys Glu Thr Thr
                245                 250                 255
Glu Ala Ala Cys Arg Tyr Gly Ala Phe Gly Leu Pro Ile Thr Val Ala
            260                 265                 270
His Val Asp Gly Gln Thr His Met Leu Phe Gly Ser Asp Arg Met Glu
        275                 280                 285
Leu Leu Ala His Leu Leu Gly Glu Lys Trp Met Gly
```

```
     290                    295                  300
```

```
<210> 6125
<211> 468
<212> DNA
<213> Homo sapiens

<400> 6125
nctacagtca ctcaggagaa gtcccgcatg gaggcttctt acttggctga caagaaaaag
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atgaaacagg acttagagga tgccagtaac aaggcggagg aggagagggc ccgcctggag
120
ggagaattga aggggctgca ggagcaaata gcagaaacca aagcccggct tatcacgcag
180
cagcatgatc gggcccaaga gcagagtgac catgccttga tgctgcgtga gctccagaag
240
ctgctgcagg aggagaggac ccagcgccag gacttggagc ttaggttaga agagacccga
300
gaagccttgg caggacgagc atatgcagct gaacagatgg aaggatttga actgcagacc
360
aagcagctga cccgtgtgagt ggaggagctg aaaagtgaac tgcaggccat tcgagatgag
420
aagaatcagc cagacccccg gctgcaagaa cttcaggaag aggccgcc
468
```

```
<210> 6126
<211> 156
<212> PRT
<213> Homo sapiens

<400> 6126
Xaa Thr Val Thr Gln Glu Lys Ser Arg Met Glu Ala Ser Tyr Leu Ala
1               5                   10                  15
Asp Lys Lys Lys Met Lys Gln Asp Leu Glu Asp Ala Ser Asn Lys Ala
            20                  25                  30
Glu Glu Glu Arg Ala Arg Leu Glu Gly Glu Leu Lys Gly Leu Gln Glu
        35                  40                  45
Gln Ile Ala Glu Thr Lys Ala Arg Leu Ile Thr Gln Gln His Asp Arg
    50                  55                  60
Ala Gln Glu Gln Ser Asp His Ala Leu Met Leu Arg Glu Leu Gln Lys
65                  70                  75                  80
Leu Leu Gln Glu Gln Arg Thr Gln Arg Gln Asp Leu Glu Leu Arg Leu
                85                  90                  95
Glu Glu Thr Arg Glu Ala Leu Ala Gly Arg Ala Tyr Ala Ala Glu Gln
            100                 105                 110
Met Glu Gly Phe Glu Leu Gln Thr Lys Gln Leu Thr Arg Glu Val Glu
        115                 120                 125
Glu Leu Lys Ser Glu Leu Gln Ala Ile Arg Asp Glu Lys Asn Gln Pro
    130                 135                 140
Asp Pro Arg Leu Gln Glu Leu Gln Glu Glu Ala Ala
145                 150                 155
```

```
<210> 6127
<211> 1900
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<212> DNA
<213> Homo sapiens

<400> 6127
gtttcctgga ttacaggcca ggcantggag ataggcagcn ncagcctgac tatcctggta
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gaatgctggg atgggcacct gacacccct gaggttgcat ccctggctga cagggcatca
120
cgggcaagag actccaatat ggtgagggcg gcagcagagc tggccctgag ctgcctgcct
180
cacgcccatg cattgaaccc taatgagatc cagcgggccc tggtgcagtg caaggaacag
240
gacaacctga tgttggagaa ggcctgcatg gcagtggaag aggcagctaa gggtgggggc
300
gtgtaccctg aagtgttgtt tgaggttgct caccagtggt tctggctata tgagcaaact
360
gcaggtggct catccacagc ccgtgaaggg gctacaagct gtagtgccag tgggatcagg
420
gcaggtgggg aagctgggcg gggtatgcct gagggtagag ggggcccagg gactgagccg
480
gttacagtgg cagcggcagc agtgacagca gcagccacag tggtgcccgt catatcggtg
540
gggtctagtt tataccgggg tccaggactg gggcatggcc actccctgg cctgcacccc
600
tacactgctc tacagcccca cctgccctgt agccctcagt atctcactca cccagctcac
660
cctgcccacc ccatgcctca catgccccgg cctgccgtct tccctgtgcc cagctctgca
720
tacccacagg gtgtgcatcc tgcattccta ggggctcagt acccttattc agtgactcct
780
ccctcacttg ctgccactgc tgtgtctttc cccgttcctt ccatggcacc catcacagta
840
catccctacc acacagagcc agggcttcca ctgcccacca gtgtgggctg tgagttgtgg
900
ggccagggaa cagtgagcag tgtccatcca gcatccacgt ttccagccat ccaaggtgcc
960
tcactgcctg ccctgaccac acagcccagc cctctggtga gcggaggttt tccaccgccc
1020
gaggaggaga cacacagtca gccagtcaat ccccacagcc tgcaccacct gcatgctgcc
1080
taccgtgtcg gaatgctggc actggagatg ctgggtcgcc gggcacacaa cgatcacccc
1140
aacaacttct cccgctcccc ccctacact gatgatgtca aatggttgct ggggctggca
1200
gcaaagctgg gagtgaacta cgtgcaccag ttctgtgtgg gggcagccaa gggggtgctg
1260
agcccgtttg tgctgcagga gatcgtcatg gagacgctgc agcggctgag tcccgctcat
1320
gcccacaacc acctgcgtgc cccggccttc caccaactgg tgcagcgctg ccagcaggca
1380
tacatgcagt acatccacca ccgcttgatt cacctgactc ctgcggacta cgacgacttt
1440
gtgaatgcga tccggagtgc ccgcagcgcc ttctgcctga cgcccatggg catgatgcag
1500

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ttcaacgaca tcctacagaa cctcaagcgc agcaaacaga ccaaggagct gtggcagcgg
1560
gtctcactcg agatggccac cttctccccc tgagtctttc acccttaggg tcctatacag
1620
ggacccaggc ctgtggctat ggggggcccct cacacagggg gagtgaaact tggctggaca
1680
gatcatcctc actcagttcc ctggtagcac agactgacag ctgctcttgg gctatagctt
1740
ggggccaaga tgtctcacac cctagaagcc tagggctggg ggagacagcc ctgtctggga
1800
gggggcgttg ggtggcctct ggtatttatt tggcatttat aaatatataa actccttttt
1860
tactctagtc gacctgggcc tttcccttct ttccaaattt
1900
```

<210> 6128
<211> 530
<212> PRT
<213> Homo sapiens

<400> 6128
```
Val Ser Trp Ile Thr Gly Gln Ala Xaa Glu Ile Gly Ser Xaa Ser Leu
1               5                   10                  15
Thr Ile Leu Val Glu Cys Trp Asp Gly His Leu Thr Pro Pro Glu Val
            20                  25                  30
Ala Ser Leu Ala Asp Arg Ala Ser Arg Ala Arg Asp Ser Asn Met Val
        35                  40                  45
Arg Ala Ala Ala Glu Leu Ala Leu Ser Cys Leu Pro His Ala His Ala
    50                  55                  60
Leu Asn Pro Asn Glu Ile Gln Arg Ala Leu Val Gln Cys Lys Glu Gln
65                  70                  75                  80
Asp Asn Leu Met Leu Glu Lys Ala Cys Met Ala Val Glu Glu Ala Ala
                85                  90                  95
Lys Gly Gly Gly Val Tyr Pro Glu Val Leu Phe Glu Val Ala His Gln
            100                 105                 110
Trp Phe Trp Leu Tyr Glu Gln Thr Ala Gly Gly Ser Ser Thr Ala Arg
        115                 120                 125
Glu Gly Ala Thr Ser Cys Ser Ala Ser Gly Ile Arg Ala Gly Gly Glu
    130                 135                 140
Ala Gly Arg Gly Met Pro Glu Gly Arg Gly Gly Pro Gly Thr Glu Pro
145                 150                 155                 160
Val Thr Val Ala Ala Ala Ala Val Thr Ala Ala Thr Val Ser Pro
                165                 170                 175
Val Ile Ser Val Gly Ser Ser Leu Tyr Pro Gly Pro Gly Leu Gly His
            180                 185                 190
Gly His Ser Pro Gly Leu His Pro Tyr Thr Ala Leu Gln Pro His Leu
        195                 200                 205
Pro Cys Ser Pro Gln Tyr Leu Thr His Pro Ala His Pro Ala His Pro
    210                 215                 220
Met Pro His Met Pro Arg Pro Ala Val Phe Pro Val Pro Ser Ser Ala
225                 230                 235                 240
Tyr Pro Gln Gly Val His Pro Ala Phe Leu Gly Ala Gln Tyr Pro Tyr
                245                 250                 255
Ser Val Thr Pro Pro Ser Leu Ala Ala Thr Ala Val Ser Phe Pro Val
```

```
              260                 265                 270
Pro Ser Met Ala Pro Ile Thr Val His Pro Tyr His Thr Glu Pro Gly
        275                 280                 285
Leu Pro Leu Pro Thr Ser Val Ala Cys Glu Leu Trp Gly Gln Gly Thr
        290                 295                 300
Val Ser Ser Val His Pro Ala Ser Thr Phe Pro Ala Ile Gln Gly Ala
305                 310                 315                 320
Ser Leu Pro Ala Leu Thr Thr Gln Pro Ser Pro Leu Val Ser Gly Gly
                325                 330                 335
Phe Pro Pro Pro Glu Glu Glu Thr His Ser Gln Pro Val Asn Pro His
            340                 345                 350
Ser Leu His His Leu His Ala Ala Tyr Arg Val Gly Met Leu Ala Leu
        355                 360                 365
Glu Met Leu Gly Arg Arg Ala His Asn Asp His Pro Asn Asn Phe Ser
    370                 375                 380
Arg Ser Pro Pro Tyr Thr Asp Asp Val Lys Trp Leu Leu Gly Leu Ala
385                 390                 395                 400
Ala Lys Leu Gly Val Asn Tyr Val His Gln Phe Cys Val Gly Ala Ala
                405                 410                 415
Lys Gly Val Leu Ser Pro Phe Val Leu Gln Glu Ile Val Met Glu Thr
        420                 425                 430
Leu Gln Arg Leu Ser Pro Ala His Ala His Asn His Leu Arg Ala Pro
        435                 440                 445
Ala Phe His Gln Leu Val Gln Arg Cys Gln Gln Ala Tyr Met Gln Tyr
    450                 455                 460
Ile His His Arg Leu Ile His Leu Thr Pro Ala Asp Tyr Asp Asp Phe
465                 470                 475                 480
Val Asn Ala Ile Arg Ser Ala Arg Ser Ala Phe Cys Leu Thr Pro Met
                485                 490                 495
Gly Met Met Gln Phe Asn Asp Ile Leu Gln Asn Leu Lys Arg Ser Lys
        500                 505                 510
Gln Thr Lys Glu Leu Trp Gln Arg Val Ser Leu Glu Met Ala Thr Phe
        515                 520                 525
Ser Pro
    530

<210> 6129
<211> 2012
<212> DNA
<213> Homo sapiens

<400> 6129
ataggagcag tttcagtacc agcccgagta ggatggaatc aaacacggtg ctggaacatt
60
cctacccgga agtggccccg acccccctcc cccgtcccg gcctcccacg cacgggggg
120
gggggggggg gggctgatcg gcgctaccgg attggacaac ttggcatggg gcggggcctc
180
tgggaggcgt ggcctccggc cggctcctct gctgttgcca agggaaactg ccgcgaggag
240
gcggaaggag cagaggaccg gcagccggcg tcgaggcggg gcgcgggaac gacggcggcc
300
atggcggcct cggggccgg gtgtcgcagc tggtgcttgt gtcccgaggt gccatccgcc
360
```

```
accttcttca ctgcgctgct ctcgctgctg gtttccgggc ctcgcctgtt cctgctgcag
420
cagcccctgg cgccctcggg cctcacgctg aagtccgagg cccttcgcaa ctggcaagtt
480
tacaggctgg taacctacat ctttgtctac gagaatccca tctccctgct ctgcggcgct
540
atcatcatct ggcgctttgc tggcaatttc gagagaaccg tgggcaccgt ccgccactgc
600
ttcttcaccg tgatcttcgc catcttcctc gctatcatct tcctgtcatt cgaggctgtg
660
tcatcactgt caaagctggg ggaagtggag gatgccagag gtttcacccc agtggccttt
720
gccatgctgg gagtcaccac cgtccgttct cggatgaggc gggccctggt gtttggcatg
780
gttgtgccct cagtcctggt tccgtggctc ctgctgggtg cctcgtggct cattccccag
840
acctctttcc tcagtaatgt ctgcgggctg tccatcgggc tggcctatgg cctcacctac
900
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960
agcctgatga ggaggatatc cgtgttcaag tacgtctcag ggtcttcagc cgagaggagg
1020
gcagcccaga gccggaaact gaacccggtg cctggctcct accccacaca gagctgccac
1080
cctcacctgt ccccaagcca ccctgtgtcc cagacgcagc acgccagtgg tcagaagctg
1140
gcctcctggc cctcctgcac ccccgggcac atgcccacct tgcctccgta ccagcctgcc
1200
tccggcctgt gctatgtgca gaaccacttt ggtccaaacc ccacctcctc cagtgtctac
1260
ccagcttctg cgggcacctc cctgggcatc cagcccccca cgcctgtgaa cagccctggc
1320
acggtgtatt ctggggcctt gggcacacca ggggctgcag gctccaagga gtcctccagg
1380
gtccccatgc cctgagagaa tttctaggga agtcatctca cttggccttc tgaaggtcct
1440
ccctaagagt ctcctgacaa aagttactta ttgaacacct ctatgtgcca ggctctgtgt
1500
tgggtacttt gatcaatgcc cctgtttcag tctcatctgt actcacggca gccctgtgga
1560
gtacggtgta ctggcccagc ttacagatgc agaaagcgag acgttctgcc atcagataaa
1620
gtcacgtggc tctttagtaa cacggacaag gctcctcgcc aaggaactcg tggcagaaga
1680
gggcagcagt tggcagtagc tgccgatgtc tgtccccagc tccaccattc ctccctgtgg
1740
ctgtgccgtg ctcgtggttt cagtgtccgt gtgtccatgt gtctgccctt caggagctcg
1800
cagctggtgt gcttggcggt cccaggcctg tgtagtgtct ctcccctgct gcgggcgccc
1860
ccacccccgat tcctctcccc agaagcggtg ggatggggcc ccatgaactg cagcagcatg
1920
ctgaggtgtc catgttgtct gcctttgtat aaagaaacag cctctgacct gcaaaaaaaa
1980
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```
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
2012

<210> 6130
<211> 364
<212> PRT
<213> Homo sapiens

<400> 6130
Met Ala Ala Ser Gly Pro Gly Cys Arg Ser Trp Cys Leu Cys Pro Glu
1               5                   10                  15
Val Pro Ser Ala Thr Phe Phe Thr Ala Leu Leu Ser Leu Leu Val Ser
            20                  25                  30
Gly Pro Arg Leu Phe Leu Leu Gln Gln Pro Leu Ala Pro Ser Gly Leu
        35                  40                  45
Thr Leu Lys Ser Glu Ala Leu Arg Asn Trp Gln Val Tyr Arg Leu Val
    50                  55                  60
Thr Tyr Ile Phe Val Tyr Glu Asn Pro Ile Ser Leu Leu Cys Gly Ala
65                  70                  75                  80
Ile Ile Ile Trp Arg Phe Ala Gly Asn Phe Glu Arg Thr Val Gly Thr
                85                  90                  95
Val Arg His Cys Phe Phe Thr Val Ile Phe Ala Ile Phe Ser Ala Ile
            100                 105                 110
Ile Phe Leu Ser Phe Glu Ala Val Ser Ser Leu Ser Lys Leu Gly Glu
        115                 120                 125
Val Glu Asp Ala Arg Gly Phe Thr Pro Val Ala Phe Ala Met Leu Gly
    130                 135                 140
Val Thr Thr Val Arg Ser Arg Met Arg Arg Ala Leu Val Phe Gly Met
145                 150                 155                 160
Val Val Pro Ser Val Leu Val Pro Trp Leu Leu Leu Gly Ala Ser Trp
                165                 170                 175
Leu Ile Pro Gln Thr Ser Phe Leu Ser Asn Val Cys Gly Leu Ser Ile
            180                 185                 190
Gly Leu Ala Tyr Gly Leu Thr Tyr Cys Tyr Ser Ile Asp Leu Ser Glu
        195                 200                 205
Arg Val Ala Leu Lys Leu Asp Gln Thr Phe Pro Phe Ser Leu Met Arg
    210                 215                 220
Arg Ile Ser Val Phe Lys Tyr Val Ser Gly Ser Ser Ala Glu Arg Arg
225                 230                 235                 240
Ala Ala Gln Ser Ser Arg Lys Leu Asn Pro Val Pro Gly Ser Tyr Pro Thr
                245                 250                 255
Gln Ser Cys His Pro His Leu Ser Pro Ser His Pro Val Ser Gln Thr
        260                 265                 270
Gln His Ala Ser Gly Gln Lys Leu Ala Ser Trp Pro Ser Cys Thr Pro
    275                 280                 285
Gly His Met Pro Thr Leu Pro Pro Tyr Gln Pro Ala Ser Gly Leu Cys
    290                 295                 300
Tyr Val Gln Asn His Phe Gly Pro Asn Pro Thr Ser Ser Ser Val Tyr
305                 310                 315                 320
Pro Ala Ser Ala Gly Thr Ser Leu Gly Ile Gln Pro Pro Thr Pro Val
                325                 330                 335
Asn Ser Pro Gly Thr Val Tyr Ser Gly Ala Leu Gly Thr Pro Gly Ala
            340                 345                 350
Ala Gly Ser Lys Glu Ser Ser Arg Val Pro Met Pro
```

```
        355                      360

<210> 6131
<211> 3526
<212> DNA
<213> Homo sapiens

<400> 6131
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gacagcgggg aaatagacag acggttggaa aaaaaactga agatcacaca aaaagagagc    120
aggaaatcca aatctcctcc caaagtgccc attgtgattc aggacgatag ccttcccgcg    180
gggcccctc cacagatccg catcctcaag aggcccacca gcaacggtgt ggtcagcagc    240
cccaactcca ccagcaggcc caccttcca gtcaagtccc tagcacagcg agaggccgag    300
tacgccgagg cccggaagcg gatcctgggc agcgccagcc ccgaggagga gcaggagaaa    360
cccatcctcg acaggtcttc ctctgatctt cttcccttca ggccaaccag gatctcccaa    420
cccgaagaca gcaggcagcc caataatgtg atcagacagc ctttgggtcc tgatgggtca    480
cacggcttca aacagcgcag ataaatgcag gcaagaaaag atgccgccgt tgctgccgtc    540
accgcctcct gggtcgtccg ccacggggttg cactgccgtg gcagacagct ggacttgagc    600
agagggaacg acctgactta cttgcactgt gatcccccct gctccgccca ctgtgacctt    660
gaaccccatg cactgtgacc tcccccttc tccccctcc cactgtgatt ggcacatcga    720
caagggctgt cccaagtcaa tggaaaggga aagggtgggg gttaggggaa ggttggggggg    780
acccagcaag gactcagaga gtcagacagt gccacttggc cacttgggt aaagccagtg    840
ccagcaataa cagtttatca tgctcattaa tttgggattt caaaacacaa atgaaaactc    900
acacccaccc accccaagt gcatgtctcc atcacttaaa aagtaaggttc catttgaaaa    960
tatccttct ttttttttc ttcctattt tgtttgttta tacaaatatc tgatttgcaa   1020
gaaaaagtgc atgggagggg ttttagtggt ttaatgaatt tttaattaag aaagggtagt   1080
ttggtagtct acttaaaaat gtttctggga aattcactag aaacattaac caataggatt   1140
ttggtgagct tagcttctgt attcctactg ccgcccagaa aaggggcagg gctctgcagc   1200
cgccaggaca gacgagcacc ccatgcctat acctccctcc ccgagctaag tcccagggca   1260
tctgggcctt gcctggagac tgggctagct ctgtaggctc ggagagcctg gggagggtgc   1320
caaccccacc tctagtattt tgggagatag ggaaagtgaa ccgacttccc cttcccatac   1380
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ccctcagggt ggttccctac cagccaggct tactacttct agaagaaagc agagtgccag
1440
ggagtgagat tgcatccctg ggcttagaag tgacggagag aagacttgtt tagtattttg
1500
ccatcagcac aaggaaaacc aggagagagt ctgcctccag gactctgagc cttctgcctc
1560
gtatgttcag aaggtggata ggtcttccca ctccagcatg gcttgaactc ttaggggtct
1620
gcagtgctcc atctccattg gtggccccag ctcagtaact atacctggta catttcctgt
1680
gtgcaatcag taccttgaag gcagaacatt ctgaataaag ttggaaaaag aacagctttg
1740
ctttgcaaag attgatgaca gactggttcc tcagaggcct aggctacccg tcaccccttt
1800
ttccagagcg agggcctgga atgaaggcag tttatcctct gtccctggag cctggggttt
1860
gctcttggctc cttgaggtgg aagagactaa gagggcagct gcccagagca gctgtgtgta
1920
cctggctcct ctcaggcttc ctgatccctt ccattgcact gcgccttatc cctcagccag
1980
ccagacagcc tccctgctcc tgaccagcag atacgtttcg gagtggttgg tgtggttttt
2040
gtgatgaggg cagcacgtgg tggccaaggt gacaagctga gtctcacagg ctcactccct
2100
cgttggttcc ctgtgggaat ggtaggccag gcccagtaag ccatgcccca acacgtcctc
2160
tcctccggag gaagggccag ctgccagctg agtcagcagc tagtccatag cacagcctta
2220
taactgtaaa gccaggcatt gcccatgagc agagctggaa ccagagcttc agtcagtaag
2280
agggaggatt accttcagga gaaggcaagg aagaaaactg gctgctatct ttatagttcc
2340
actgccctaa ccaagtgtcc acattctaaa tgtgtagtgt ccatccctta tgtaatagtg
2400
gtttcccgcc caaagtgaga ctttcctttt aattggagaa gggtatagag gtagtccagg
2460
tgggaacgcc agaagtgctg attgcccagc cattgggacc acctgttctt gccccactac
2520
cctctagtgg gaggccaaag taaaggctgg ctggtgggtg tctgtggatt gaggatgtgg
2580
cagggactgg tcctcccacc tccctctggc caaagatggg ctttgcccgc tgtgtgcctg
2640
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2700
tttaaaaaga aagaaaacag gaaactgtat tgtgtcgggg gaggcgggag ggagatgagg
2760
aaacggtttg gattttgtgt gtgggagggt atttttttggg ggtagttgtc tgtaactttc
2820
ctaagtgctt tttttccttt tctttttaa agtaagttgc aggctttggc ttggaaaacc
2880
ccaggggggat gggggcagg aacctgaggc tgctgcccct ttatctgcct tcacggtact
2940
gtcccttcc cccagctcct ccctgacccc atgggccagg cctcagacct tccagctaac
3000
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cgcttcccat gagccactac tctgatgtca gcctataacc aaaggagctg gggggtccag
3060
gcctggtgac caacctttct cagcccactc aatcagggtg ctccccacct gcaggcagga
3120
ggcaacaccc tatctgctac catcagcccc ttccagagcc catctgcccc gcccagccct
3180
gccctgccca gccataccct gctctgcccc atctgggggt gccctgctca gggatgggct
3240
ggcagggctg tacccagcct ccctggtaag cagagactca agaaacctct ggggtcctgt
3300
tttctggtcg tgtgatccca ggggtgcaca tgggcccctt gggtgtctga acagaagggc
3360
atgggaggga gggctgcacc cctgcagtct tactctgctg gtgtagcggg cagctgccca
3420
ctcccacccc accctgcacc gcgggctcct gagtcggcag attaagcatt ttataaattg
3480
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3526


<210> 6132
<211> 167
<212> PRT
<213> Homo sapiens


<400> 6132
Xaa Gly Ala Ala Ser Lys Met Glu Asp Glu Glu Val Ala Glu Ser Trp
1               5                   10                  15
Glu Glu Ala Ala Asp Ser Gly Glu Ile Asp Arg Arg Leu Glu Lys Lys
                20                  25                  30
Leu Lys Ile Thr Gln Lys Glu Ser Arg Lys Ser Lys Ser Pro Pro Lys
        35                  40                  45
Val Pro Ile Val Ile Gln Asp Asp Ser Leu Pro Ala Gly Pro Pro Pro
    50                  55                  60
Gln Ile Arg Ile Leu Lys Arg Pro Thr Ser Asn Gly Val Val Ser Ser
65                  70                  75                  80
Pro Asn Ser Thr Ser Arg Pro Thr Leu Pro Val Lys Ser Leu Ala Gln
                85                  90                  95
Arg Glu Ala Glu Tyr Ala Glu Ala Arg Lys Arg Ile Leu Gly Ser Ala
                100                 105                 110
Ser Pro Glu Glu Glu Gln Glu Lys Pro Ile Leu Asp Arg Ser Ser Ser
        115                 120                 125
Asp Leu Leu Pro Phe Arg Pro Thr Arg Ile Ser Gln Pro Glu Asp Ser
    130                 135                 140
Arg Gln Pro Asn Asn Val Ile Arg Gln Pro Leu Gly Pro Asp Gly Ser
145                 150                 155                 160
His Gly Phe Lys Gln Arg Arg
                165


<210> 6133
<211> 4156
<212> DNA
<213> Homo sapiens


<400> 6133
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60
gcggctcaga atcaccatcc gcggcgcggg agacgagccg gccgtcccgg gccggggac
120
ccgcccgcca tggccaccaa ggctcgggtt atgtatgatt ttgctgctga acctggaaat
180
aatgaactga cggttaatga aggagaaatc atcacaatca caaatccgga tgtaggtgga
240
ggatggctgg aaggaagaaa catcaaagga gaacgagggc tggttcccac agactacgtt
300
gaaatttac ccagtgatgg aaaagatcaa ttttcttgtg gaaattcagt ggctgaccaa
360
gccttccttg attctctctc agccagcaca gctcaggcca gttcgtcggc tgccagcaac
420
aatcaccagg ttggcagtgg caatgacccc tggtcagcct ggagtgcctc caaatctggg
480
aactgggaaa gctcagaagg ctgggggcc cagccagagg gggctggagc ccaaagaaac
540
acaaacactc ccaacaactg ggacactgcc ttcggccacc cccaggccta ccaaggacca
600
gcaactggtg atgatgatga ctgggatgaa gactgggatg ggccaaatc ctcttcctac
660
tttaaggatt cagagtcagc tgatgcaggc ggcgctcagc gaggaaacag tcgtgctagt
720
tcctcatcca tgaaaattcc ccttaacaaa tttcctggat ttgcgaaacc tggcacggaa
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840
gattatggcc caatgtgggt ttatcctacc tctacttttg actgtgtggt agcagatccc
900
agaaaaggct ccaaaatgta tggtctaaag agctacatcg aatatcagct aacacctact
960
aacactaatc gatctgtaaa ccacaggtat aagcactttg actggttata tgagcgtctc
1020
ctggttaagt ttgggtcagc cattccaatc ccttctcttc cagacaaaca agtcacaggc
1080
cgctttgaag aggaatttat caaaatgcgc atggagagac ttcaggcctg gatgaccagg
1140
atgtgtcgcc atccagtaat ctcagaaagt gaagtttcc agcagttcct aaatttccga
1200
gatgagaagg aatggaaaac tggaaagagg aaggccgaga gagatgagct ggcgggagtc
1260
atgatatttt ccaccatgga accagaggca cctgacttgg acttagtaga aatagagcag
1320
aagtgcgagg ctgtggggaa gttcaccaag gccatggatg acggcgtgaa ggagctgctg
1380
acggtggggc aggagcactg gaagcgctgc acgggcccat acccaaggga atatcagaag
1440
ataggaaagg ccttgcagag tttggccaca gtgttcagtt ccagtggcta tcaaggtgaa
1500
acagatctca atgatgcaat aacagaagca ggaaagactt atgaagaaat tgccagtctc
1560
gtggcagaac agccaaagaa agatctccat ttcctgatgg aatgtaatca cgagtataaa
1620
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ggttttcttg gctgcttccc tgacatcatt ggcactcaca agggagcaat agaaaaagtg
1680
aaagaaagtg acaaactagt tgcaacaagt aaaatcaccc tacaagacaa acagaacatg
1740
gtgaagagag tcagcatcat gtcttacgcg ttgcaagctg agatgaatca ctttcacagt
1800
aaccggatct atgattacaa cagtgtcatc cgcctgtacc tggagcagca agtgcaattt
1860
tacgaaacga ttgcagaaaa gctgaggcag gccctcagcc gctttccagt gatgtaggac
1920
agaacgggcc ttgaagagaa tgccgcgtgc tttctcctga cttggggcaa tgcaattcaa
1980
aacttttttt cccctattat tcagaaaaaa aaggaaacaa aaccaaaaag aaagagttgc
2040
aaaaaactgc atttatttta ttagccaccc taaatgcgtc agttatttag ggatggtctt
2100
ttgttcattt ccgcatccat tatttaaacc agtggaaatt gtctctattt ttggaaagta
2160
cttaaaagtt accagaattt tcaatggaaa atgaggggtt tctccccact gatattttac
2220
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2280
acaatcttcc agttcttacc cagtgtcaga taattaatta ctaattactt tcttaaaaac
2340
atgaactatg ccagaataaa aaatatctat gtttgtatat ttttataact cctttcagtc
2400
ctctggggct cctgtcattg agggaagtcg ttacgccttt cactgccaca gttacagctc
2460
aagtgcttac acttcaagag ggaggacgct gggggccccct ggggctgcta gtgccatcgt
2520
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2580
agcagatacc cctggccacc catgtcctca gcgacatttc tgatgtgctg ctcttatgtg
2640
aggaccagtg ctttctctct ttgcacttcc ttcctaatct tggttaaggc atgttttatg
2700
ccatgaagaa tacattagaa gaattgaggg actttgtaga gaattttgtg gctttggtcc
2760
aacgggtgag tggctgtgcg gaggcctgtg ttcgggaggg cctgggagaa ggagggcacc
2820
cagcaccccg gcgtctctgg cccttcctta ttctttggct cctcatccac cgtgatgaga
2880
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3000
tgagaagggc tgcagcctca gcagtgtaca gagtccccgg cgctctgagg ttggagagaa
3060
agaacagacc agcgcccttc ctgactacat ccgaaacttc acacaggggtg tttctgagca
3120
ccagcacttc cagcgcttca cttaacggca taaagcaaaa caggaccttg gcacaccgtc
3180
agctcgaact caacactggc agccaccgtc tcacccctgc ggaggagcgc tcccgtctcc
3240
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cacaggtgcc ttaccgcgtt ccctcccgct gctttcattt ttctgaccta ataattacgg
3300
gaaatggaaa gtctgggcca gcatcaataa aatgacacca aaaataagta gatgaaatca
3360
aatgaatatg agaacatctt gttcttcaat atcacgggtt tttgttaatg tttcataagt
3420
aattctcccc acttgatttt tcttctataa aatcccatag aacaatgttt atgctatagc
3480
catttaatat atgtacaaat tgtaaagaat atgtataaat gttttacacg aatgtaagag
3540
catgtagaag ccaacatata aataaattgt ttaaaaaaac tgtacagtaa attctcaaag
3600
cacttttttca aaacacttttt tggactttgt gtgtgatttt tgttgttgtt gttaagtact
3660
ttttattcca gctgctgaaa atggtccagg taatgaattc ttccccaaat cctatttctt
3720
ctgacatgaa ttcatcattt cagttccgta ggtcagtgtt gcggtccggg aagcgtatca
3780
taaccacctg ggagttgcca agaagcagac agtctcccag tgtctgactc tcggatattt
3840
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3900
tcctcagagc gtggtagccg actgtgagga aaagcagagg gaatgtgaaa gaaaataaga
3960
gaatccacgg gatttgatgc ctggaagatt ctccttcaag tggcaacatg gcatatatat
4020
ccttctccgg ggagtcacat gcaccatttg gttcttagat acgttgatgt tttgatttttt
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4140
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4156
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<210> 6134
<211> 595
<212> PRT
<213> Homo sapiens

<400> 6134
Met Ala Thr Lys Ala Arg Val Met Tyr Asp Phe Ala Ala Glu Pro Gly
1               5                   10                  15
Asn Asn Glu Leu Leu Thr Val Asn Glu Gly Glu Ile Ile Thr Ile Thr Asn
            20                  25                  30
Pro Asp Val Gly Gly Gly Trp Leu Glu Gly Arg Asn Ile Lys Gly Glu
        35                  40                  45
Arg Gly Leu Val Pro Thr Asp Tyr Val Glu Ile Leu Pro Ser Asp Gly
    50                  55                  60
Lys Asp Gln Phe Ser Cys Gly Asn Ser Val Ala Asp Gln Ala Phe Leu
65                  70                  75                  80
Asp Ser Leu Ser Ala Ser Thr Ala Gln Ala Ser Ser Ser Ala Ala Ser
                85                  90                  95
Asn Asn His Gln Val Gly Ser Gly Asn Asp Pro Trp Ser Ala Trp Ser
                100                 105                 110
Ala Ser Lys Ser Gly Asn Trp Glu Ser Ser Glu Gly Trp Gly Ala Gln
```

```
                 115                      120                      125
Pro Glu Gly Ala Gly Ala Gln Arg Asn Thr Asn Thr Pro Asn Asn Trp
     130                      135                      140
Asp Thr Ala Phe Gly His Pro Gln Ala Tyr Gln Gly Pro Ala Thr Gly
145                      150                      155                      160
Asp Asp Asp Asp Trp Asp Glu Asp Trp Asp Gly Pro Lys Ser Ser Ser
                 165                      170                      175
Tyr Phe Lys Asp Ser Glu Ser Ala Asp Ala Gly Gly Ala Gln Arg Gly
            180                      185                      190
Asn Ser Arg Ala Ser Ser Ser Ser Met Lys Ile Pro Leu Asn Lys Phe
            195                      200                      205
Pro Gly Phe Ala Lys Pro Gly Thr Glu Gln Tyr Leu Leu Ala Lys Gln
     210                      215                      220
Leu Ala Lys Pro Lys Glu Lys Ile Pro Ile Ile Val Gly Asp Tyr Gly
225                      230                      235                      240
Pro Met Trp Val Tyr Pro Thr Ser Thr Phe Asp Cys Val Val Ala Asp
                 245                      250                      255
Pro Arg Lys Gly Ser Lys Met Tyr Gly Leu Lys Ser Tyr Ile Glu Tyr
            260                      265                      270
Gln Leu Thr Pro Thr Asn Thr Asn Arg Ser Val Asn His Arg Tyr Lys
     275                      280                      285
His Phe Asp Trp Leu Tyr Glu Arg Leu Leu Val Lys Phe Gly Ser Ala
     290                      295                      300
Ile Pro Ile Pro Ser Leu Pro Asp Lys Gln Val Thr Gly Arg Phe Glu
305                      310                      315                      320
Glu Glu Phe Ile Lys Met Arg Met Glu Arg Gln Ala Trp Met Thr
                 325                      330                      335
Arg Met Cys Arg His Pro Val Ile Ser Glu Ser Glu Val Phe Gln Gln
            340                      345                      350
Phe Leu Asn Phe Arg Asp Glu Lys Lys Glu Trp Lys Thr Gly Lys Arg Lys
            355                      360                      365
Ala Glu Arg Asp Glu Leu Ala Gly Val Met Ile Phe Ser Thr Met Glu
     370                      375                      380
Pro Glu Ala Pro Asp Leu Asp Leu Val Glu Ile Glu Gln Lys Cys Glu
385                      390                      395                      400
Ala Val Gly Lys Phe Thr Lys Ala Met Asp Asp Gly Val Lys Glu Leu
                 405                      410                      415
Leu Thr Val Gly Gln Glu His Trp Lys Arg Cys Thr Gly Pro Leu Pro
            420                      425                      430
Lys Glu Tyr Gln Lys Ile Gly Lys Ala Leu Gln Ser Leu Ala Thr Val
     435                      440                      445
Phe Ser Ser Ser Gly Tyr Gln Gly Glu Thr Asp Leu Asn Asp Ala Ile
     450                      455                      460
Thr Glu Ala Gly Lys Thr Tyr Glu Glu Ile Ala Ser Leu Val Ala Glu
465                      470                      475                      480
Gln Pro Lys Lys Asp Leu His Phe Leu Met Glu Cys Asn His Glu Tyr
                 485                      490                      495
Lys Gly Phe Leu Gly Cys Phe Pro Asp Ile Ile Gly Thr His Lys Gly
            500                      505                      510
Ala Ile Glu Lys Val Lys Glu Ser Asp Lys Leu Val Ala Thr Ser Lys
     515                      520                      525
Ile Thr Leu Gln Asp Lys Gln Asn Met Val Lys Arg Val Ser Ile Met
     530                      535                      540
Ser Tyr Ala Leu Gln Ala Glu Met Asn His Phe His Ser Asn Arg Ile
```

```
545                    550                    555                    560
Tyr Asp Tyr Asn Ser Val Ile Arg Leu Tyr Leu Glu Gln Gln Val Gln
                           565                    570                    575
Phe Tyr Glu Thr Ile Ala Glu Lys Leu Arg Gln Ala Leu Ser Arg Phe
                       580                    585                    590
Pro Val Met
            595
```

```
<210> 6135
<211> 526
<212> DNA
<213> Homo sapiens

<400> 6135
tcgacgtccc tccttctgag ccatcagcaa ctaggcgact acaggaaact tactccaaat      60
tgctactaga aaagaccttg cttgaagagc catctcatca acatgttacg caggaaacac     120
aggccaaacc agggtatcag ccatctggag aatctgacaa agaaaacaaa gtacaggaac     180
gtcccccaag tgcgtctcc agtagtgaca tgtctctctc agaacctcca cagcctcttg       240
caagaaaaga cttgatggaa tctacatgga tgcagcctga aagattgagc ccacaagttc     300
accattctca accacagcct tttgctggaa cagctggaag tttactctcc catctcttga     360
gtttagagca tgtaggaatt ttgcataagg attttgaatc tattttacca accaggaaga     420
atcataatat ggcttcaagg ccattaactt ttacacctca accatatgtg acctcaccag     480
ctgcttatac agatgccttg gtaaaaccta gtgccagcca atataa                    526
```

```
<210> 6136
<211> 105
<212> PRT
<213> Homo sapiens

<400> 6136
Met Ser Leu Ser Glu Pro Pro Gln Pro Leu Ala Arg Lys Asp Leu Met
 1                   5                    10                   15
Glu Ser Thr Trp Met Gln Pro Glu Arg Leu Ser Pro Gln Val His His
                    20                   25                   30
Ser Gln Pro Gln Pro Phe Ala Gly Thr Ala Gly Ser Leu Leu Ser His
            35                   40                   45
Leu Leu Ser Leu Glu His Val Gly Ile Leu His Lys Asp Phe Glu Ser
        50                   55                   60
Ile Leu Pro Thr Arg Lys Asn His Asn Met Ala Ser Arg Pro Leu Thr
65                   70                   75                   80
Phe Thr Pro Gln Pro Tyr Val Thr Ser Pro Ala Ala Tyr Thr Asp Ala
                         85                   90                   95
Leu Val Lys Pro Ser Ala Ser Gln Tyr
                100                  105
```

<210> 6137
<211> 2073
<212> DNA
<213> Homo sapiens

<400> 6137
ngcggccgcc aagcgatccc tgctccgcgc gacactgcgt gcccgcgcac gcagagaggc
60
ggtgacgcac tttacggcgg cagcgtaagt gcgtgacgct cgtcagtggc ttcagttcac
120
acgttggcgcc agcggaggca ggttgctgtg tttgtgcttc cttctacagc caatatgaaa
180
aggcctaagt taaagaaagc aagtaaacgc atgacctgcc ataagcggta taaaatccaa
240
aaaaaggttc gagaacatca tcgaaaatta agaaaggagg ctaaaaagca gggtcacaag
300
aagcctagga aagacccagg agttccaaac agtgctccct ttaaggaggc tcttcttagg
360
gaagctgagc taaggaaaca gaggcttgaa gaactaaaac agcagcagaa acttgacagg
420
cagaaggaac tagaaaagaa aagaaaactt gaaactaatc ctgatattaa gnccatccaaa
480
tgtggaaccn ntatggaaaa ggagtttggg ctttgcaaaa ctgagaacaa agccaagtcg
540
ggcaaacaga attcaaagaa gctgtactgc caagaactta aaaaggtgat tgaagcctcc
600
gatgttgtcc tagaggtgtt ggatgccaga gatcctcttg gttgcagatg tcctcaggta
660
gaagaggcca ttgtccagag tggacagaaa aagctggtac ttatattaaa taaatcagat
720
ctggtaccaa aggagaattc ggagagctgg ctaaattatt tgaagaaaga attgccaaca
780
gtggtgttca gagcctcaac aaaaaccaaag gataaaggga agataaccaa gcgtgtgaag
840
gcaaagaaga atgctgctcc attcagaagt gaagtctgct ttgggaaaga gggcctttgg
900
aaacttcttg gaggtttttca ggaaacttgc agcaaagcca ttcgggttgg agtaattggt
960
ttcccaaatg tggggaaaag cagcattatc aatagcttaa aacaagaaca gatgtgtaat
1020
gttggtgtat ccatggggct tacaaggagc atgcaagttg tcccccttgga caaacagatc
1080
acaatcatag atagtccgag cttcatcgta tctccactta attcctcctc tgcgcttgct
1140
ctgcgaagtc cagcaagtat tgaagtagta aaaccgatgg aggctgccag tgccatcctt
1200
tcccaggctg atgctcgaca ggtagtactg aaatatactg tcccaggcta caggaattct
1260
ctggaatttt ttactgtgct tgctcagaga agaggtatgc accaaaaagg tggaatcccaa
1320
aatgttgaag gtgctgccaa actgctgtgg tctgagtgga caggtgcctc attagcttac
1380
tattgccatc cccctacatc ttggactcct cctccatatt ttaatgagag tattgtggta
1440

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gacatgaaaa gcggcttcaa tctggaagaa ctggaaaaga acaatgcaca gagcataaga
1500
gccatcaagg gccctcattt ggccaatagc atcctttttcc agtcttccgg tctgacaaat
1560
ggaataatag aagaaaagga catacatgaa gaattgccaa aacggaaaga aaggaagcag
1620
gaggagaggg aggatgacaa agacagtgac caggaaactg ttgatgaaga agttgatgaa
1680
aacagctcag gcatgtttgc tgcagaagag acaggggagg cactgtctga ggagactaca
1740
gcaggtgaac agtctacaag gtcttttatc ttggataaaa tcattgaaga ggatgatgct
1800
tatgacttca gtacagatta tgtgtaacag aacaatggct ttttatgatt ttttttttta
1860
acattttaag cagactgcta aactgttctc tgtataagtt atggtatgca tgagctgtgt
1920
aaattttgtg aatatgtatt atattaaaac caggcaactt ggaatcccta aattctgtaa
1980
aaagacaatt catctcattg tgagtggaag tagttatctg gaataaaaaa agaagatacc
2040
tattgaaaaa aaaaaaaaaa aaaaaaaaaa aaa
2073


<210> 6138
<211> 550
<212> PRT
<213> Homo sapiens

<400> 6138
Met Lys Arg Pro Lys Leu Lys Lys Ala Ser Lys Arg Met Thr Cys His
1               5                   10                  15
Lys Arg Tyr Lys Ile Gln Lys Lys Val Arg Glu His His Arg Lys Leu
            20                  25                  30
Arg Lys Glu Ala Lys Lys Gln Gly His Lys Lys Pro Arg Lys Asp Pro
        35                  40                  45
Gly Val Pro Asn Ser Ala Pro Phe Lys Glu Ala Leu Leu Arg Glu Ala
    50                  55                  60
Glu Leu Arg Lys Gln Arg Leu Glu Glu Leu Lys Gln Gln Lys Leu
65                  70                  75                  80
Asp Arg Gln Lys Gln Leu Glu Lys Lys Arg Arg Lys Leu Glu Thr Asn Pro
            85                  90                  95
Asp Ile Lys Xaa Ile Lys Cys Gly Thr Xaa Met Glu Lys Glu Phe Gly
            100                 105                 110
Leu Cys Lys Thr Glu Asn Lys Ala Lys Ser Gly Lys Gln Asn Ser Lys
        115                 120                 125
Lys Leu Tyr Cys Gln Glu Leu Lys Lys Val Ile Glu Ala Ser Asp Val
        130                 135                 140
Val Leu Glu Val Leu Asp Ala Arg Asp Pro Leu Gly Cys Arg Cys Pro
145                 150                 155                 160
Gln Val Glu Glu Ala Ile Val Gln Ser Gly Gln Lys Lys Leu Val Leu
                165                 170                 175
Ile Leu Asn Lys Ser Asp Leu Val Pro Lys Glu Asn Leu Glu Ser Trp
            180                 185                 190
Leu Asn Tyr Leu Lys Lys Glu Leu Pro Thr Val Val Phe Arg Ala Ser
```

```
         195                 200                 205
Thr Lys Pro Lys Asp Lys Gly Lys Ile Thr Lys Arg Val Lys Ala Lys
    210                 215                 220
Lys Asn Ala Ala Pro Phe Arg Ser Glu Val Cys Phe Gly Lys Glu Gly
225                 230                 235                 240
Leu Trp Lys Leu Leu Gly Gly Phe Gln Glu Thr Cys Ser Lys Ala Ile
                245                 250                 255
Arg Val Gly Val Ile Gly Phe Pro Asn Val Gly Lys Ser Ser Ile Ile
            260                 265                 270
Asn Ser Leu Lys Gln Glu Gln Met Cys Asn Val Gly Val Ser Met Gly
        275                 280                 285
Leu Thr Arg Ser Met Gln Val Val Pro Leu Asp Lys Gln Ile Thr Ile
    290                 295                 300
Ile Asp Ser Pro Ser Phe Ile Val Ser Pro Leu Asn Ser Ser Ser Ala
305                 310                 315                 320
Leu Ala Leu Arg Ser Pro Ala Ser Ile Glu Val Val Lys Pro Met Glu
                325                 330                 335
Ala Ala Ser Ala Ile Leu Ser Gln Ala Asp Ala Arg Gln Val Val Leu
            340                 345                 350
Lys Tyr Thr Val Pro Gly Tyr Arg Asn Ser Leu Glu Phe Phe Thr Val
        355                 360                 365
Leu Ala Gln Arg Arg Gly Met His Gln Lys Gly Gly Ile Pro Asn Val
    370                 375                 380
Glu Gly Ala Ala Lys Leu Leu Trp Ser Glu Trp Thr Gly Ala Ser Leu
385                 390                 395                 400
Ala Tyr Tyr Cys His Pro Pro Thr Ser Trp Thr Pro Pro Pro Tyr Phe
                405                 410                 415
Asn Glu Ser Ile Val Val Asp Met Lys Ser Gly Phe Asn Leu Glu Glu
            420                 425                 430
Leu Glu Lys Asn Asn Ala Gln Ser Ile Arg Ala Ile Lys Gly Pro His
        435                 440                 445
Leu Ala Asn Ser Ile Leu Phe Gln Ser Ser Gly Leu Thr Asn Gly Ile
    450                 455                 460
Ile Glu Glu Lys Asp Ile His Glu Glu Leu Pro Lys Arg Lys Glu Arg
465                 470                 475                 480
Lys Gln Glu Glu Arg Glu Asp Asp Lys Asp Ser Asp Gln Glu Thr Val
            485                 490                 495
Asp Glu Glu Val Asp Glu Asn Ser Ser Gly Met Phe Ala Ala Glu Glu
        500                 505                 510
Thr Gly Glu Ala Leu Ser Glu Glu Thr Thr Ala Gly Glu Gln Ser Thr
    515                 520                 525
Arg Ser Phe Ile Leu Asp Lys Ile Ile Glu Glu Asp Asp Ala Tyr Asp
    530                 535                 540
Phe Ser Thr Asp Tyr Val
545                 550
```

```
<210> 6139
<211> 2249
<212> DNA
<213> Homo sapiens

<400> 6139
nncggccgca ggggccggcg ctgtcgcagc ccgtccgcct cgctcatggt acgggcgcca
60
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gcctcacccg cagaaaccac ctcacactga gcggcgccgg ctcagactcc acaggtcgtc
120
acagacgatg atggccaggc cccggaggct aaggacggca gctcctttag cggcagagtt
180
ttccgagtga ccttcttgat gctggctgtt tctctcaccg ttcccctgct tggagccatg
240
atgctgctgg aatctcctat agatccacag cctctcagct tcaaagaacc cccgctcttg
300
cttggtgttc tgcatccaaa tacgaagctg cgacaggcag aaaggctgtt tgaaaatcaa
360
cttgttggac cggagtccat agcacatatt ggggatgtga tgtttactgg gacagcagat
420
ggccgggtcg taaaacttga aaatggtgaa atagagacca ttgcccggtt tnggttcggg
480
cccnnttgca aaacccgaga tgatgagcct gtgtgtggga gacccctggg tatccgtgca
540
gggcccaatg ggactctctt tgtggccgat gcatacaagg gactatttga agtaaatccc
600
tggaaacgtg aagtgaaact gctgctgtcc tccgagacac ccattgaggg gaagaacatg
660
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720
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<212> PRT
<213> Homo sapiens

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                20                  25                  30
Leu Leu Leu Gly Val Leu His Pro Asn Thr Lys Leu Arg Gln Ala Glu
        35                  40                  45
Arg Leu Phe Glu Asn Gln Leu Val Gly Pro Glu Ser Ile Ala His Ile
    50                  55                  60
Gly Asp Val Met Phe Thr Gly Thr Ala Asp Gly Arg Val Val Lys Leu
65                  70                  75                  80
Glu Asn Gly Glu Ile Glu Thr Ile Ala Arg Phe Xaa Phe Gly Pro Xaa
                85                  90                  95
Cys Lys Thr Arg Asp Glu Pro Val Cys Gly Arg Pro Leu Gly Ile
            100                 105                 110
Arg Ala Gly Pro Asn Gly Thr Leu Phe Val Ala Asp Ala Tyr Lys Gly
        115                 120                 125
Leu Phe Glu Val Asn Pro Trp Lys Arg Glu Val Lys Leu Leu Leu Ser
    130                 135                 140
Ser Glu Thr Pro Ile Glu Gly Lys Asn Met Ser Phe Val Asn Asp Leu
145                 150                 155                 160
Thr Val Thr Gln Asp Gly Arg Lys Ile Tyr Phe Thr Asp Ser Ser Ser
                165                 170                 175
Lys Trp Gln Arg Arg Asp Tyr Leu Leu Leu Val Met Glu Gly Thr Asp
            180                 185                 190
Asp Gly Arg Leu Leu Glu Tyr Asp Thr Val Thr Arg Glu Val Lys Val
        195                 200                 205
Leu Leu Asp Gln Leu Arg Phe Pro Asn Gly Val Gln Leu Ser Pro Ala
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Glu Asp Phe Val Leu Val Ala Glu Thr Thr Met Ala Arg Ile Arg Arg
225                   230                   235                   240
Val Tyr Val Ser Gly Leu Met Lys Gly Gly Ala Asp Leu Phe Val Glu
                  245                   250                   255
Asn Met Pro Gly Phe Pro Asp Asn Ile Arg Pro Ser Ser Ser Gly Gly
              260                   265                   270
Tyr Trp Val Gly Met Ser Thr Ile Arg Pro Asn Pro Gly Phe Ser Met
          275                   280                   285
Leu Asp Phe Leu Ser Glu Arg Pro Trp Ile Lys Arg Met Ile Phe Lys
      290                   295                   300
Gly Ser Cys Ala Gly Cys Asp Leu Leu Phe Ser Gln Glu Thr Val Met
305                   310                   315                   320
Lys Phe Val Pro Arg Tyr Ser Leu Val Leu Glu Leu Ser Asp Ser Gly
                  325                   330                   335
Ala Phe Arg Arg Ser Leu His Asp Pro Asp Gly Leu Val Ala Thr Tyr
              340                   345                   350
Ile Ser Glu Val His Glu His Asp Gly His Leu Tyr Leu Gly Ser Phe
          355                   360                   365
Arg Ser Pro Phe Leu Cys Arg Leu Ser Leu Gln Ala Val
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<210> 6141
<211> 5651
<212> DNA
<213> Homo sapiens

<400> 6141
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720
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780
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960
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2400
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<210> 6142
<211> 513
<212> PRT
<213> Homo sapiens

<400> 6142
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Leu Leu Cys Ser Cys Cys Gly Pro Pro Pro Leu Arg Pro Pro Leu Pro
            20                  25                  30
Ala Ala Ala Ala Ala Ala Ala Gly Gly Gln Leu Leu Gly Asp Gly Gly
        35                  40                  45
Ser Pro Gly Arg Thr Glu Gln Pro Pro Ser Pro Gln Ser Ser Ser
    50                  55                  60
Gly Phe Leu Tyr Arg Arg Leu Lys Thr Gln Glu Lys Arg Glu Met Gln
65                  70                  75                  80
Lys Glu Ile Leu Ser Val Leu Gly Leu Pro His Arg Pro Arg Pro Leu
                85                  90                  95
His Gly Leu Gln Gln Pro Gln Pro Pro Ala Leu Arg Gln Gln Glu Glu
                100                 105                 110
Gln Gln Gln Gln Gln Gln Leu Pro Arg Gly Glu Pro Pro Pro Gly Arg
            115                 120                 125
Leu Lys Ser Ala Pro Leu Phe Met Leu Asp Leu Tyr Asn Ala Leu Ser
    130                 135                 140
Ala Asp Asn Asp Glu Asp Gly Ala Ser Glu Gly Glu Arg Gln Gln Ser
145                 150                 155                 160
Trp Pro His Glu Ala Ala Ser Ser Ser Gln Arg Arg Gln Pro Pro Pro
                165                 170                 175
Gly Ala Ala His Pro Leu Asn Arg Lys Ser Leu Leu Ala Pro Gly Ser
                180                 185                 190
Gly Ser Gly Gly Ala Ser Pro Leu Thr Ser Ala Gln Asp Ser Ala Phe
            195                 200                 205
Leu Asn Asp Ala Asp Met Val Met Ser Phe Val Asn Leu Val Glu Tyr
    210                 215                 220
Asp Lys Glu Phe Ser Pro Arg Gln Arg His His Lys Glu Phe Lys Phe
225                 230                 235                 240
Asn Leu Ser Gln Ile Pro Glu Gly Gly Val Val Thr Ala Ala Glu Phe
                245                 250                 255
Arg Ile Tyr Lys Asp Cys Val Met Gly Ser Phe Lys Asn Gln Thr Phe
                260                 265                 270
Leu Ile Ser Ile Tyr Gln Val Leu Gln Glu His Gln His Arg Asp Ser
    275                 280                 285
Asp Leu Phe Leu Leu Asp Thr Arg Val Val Trp Ala Ser Glu Glu Gly
    290                 295                 300
Trp Leu Glu Phe Asp Ile Thr Ala Thr Ser Asn Leu Trp Val Val Thr
305                 310                 315                 320
Pro Gln His Asn Met Gly Leu Gln Leu Ser Val Val Thr Arg Asp Gly
            325                 330                 335
Val His Val His Pro Arg Ala Ala Gly Leu Val Gly Arg Asp Gly Pro
            340                 345                 350
Tyr Asp Lys Gln Pro Phe Met Val Ala Phe Phe Lys Val Ser Glu Val
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His Val Arg Thr Thr Arg Ser Ala Ser Ser Arg Arg Arg Gln Gln Ser
     370                  375                  380
Arg Asn Arg Ser Thr Gln Ser Gln Asp Val Ala Arg Val Ser Ser Ala
385                  390                  395                  400
Ser Asp Tyr Asn Ser Ser Glu Leu Lys Thr Ala Cys Arg Lys His Glu
                         405                  410                  415
Leu Tyr Val Ser Phe Gln Asp Leu Gly Trp Gln Asp Trp Ile Ile Ala
                420                  425                  430
Pro Lys Gly Tyr Ala Ala Asn Tyr Cys Asp Gly Glu Cys Ser Phe Pro
                435                  440                  445
Leu Asn Ala His Met Asn Ala Thr Asn His Ala Ile Val Gln Thr Leu
     450                  455                  460
Val His Leu Met Asn Pro Glu Tyr Val Pro Lys Pro Cys Cys Ala Pro
465                  470                  475                  480
Thr Lys Leu Asn Ala Ile Ser Val Leu Tyr Phe Asn Asp Asn Ser Lys
                485                  490                  495
Ile Thr Leu Lys Lys Tyr Arg Asn Met Val Val Arg Ala Cys Gly Tyr
                500                  505                  510
Cys
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<210> 6143
<211> 1137
<212> DNA
<213> Homo sapiens

<400> 6143
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120
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180
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780
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<210> 6144
<211> 141
<212> PRT
<213> Homo sapiens

<400> 6144
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            20                  25                  30
Ser Gly Ser Arg Gln Ala Trp Val His Pro Pro Ala Gln Pro Arg Thr
        35                  40                  45
Ala Gly Pro Glu Leu Gly Gly Gln Gly Ile Pro Ser Pro Gly Cys Ala
    50                  55                  60
Cys Gln Arg Gly Glu Ala Gly Gly Gly Gly Asn Ala Val Leu Pro Gln
65                  70                  75                  80
Glu Ser Val Leu Arg Ala Ser Ala Val Gly Arg Gly Ala Glu Gly Pro
                85                  90                  95
Gly Ala Leu Thr Arg Ser Gly Ser Gly Ala Ala Ser Ala Leu Val Arg
            100                 105                 110
Pro Gly Glu Lys Gly Cys Trp Cys Arg Thr Ala Ser Gly Ala Gly Pro
        115                 120                 125
Ser Gly Asp Arg Gly Pro Glu Val Gln Val Pro Gly Gly
    130                 135                 140
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<210> 6145
<211> 766
<212> DNA
<213> Homo sapiens

<400> 6145
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300
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766


<210> 6146
<211> 100
<212> PRT
<213> Homo sapiens

<400> 6146
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Ser Pro Val Pro Arg Ala Met Ser Ser Gln Gln Gln Gln Arg Gln Ala
            20                  25                  30
Ala Val Pro Thr Pro Glu Ala Gln Gln Gln Gln Val Lys Gln Pro Cys
        35                  40                  45
Gln Pro Pro Pro Val Lys Cys Gln Glu Thr Cys Ala Pro Lys Thr Lys
    50                  55                  60
Asp Pro Cys Ala Pro Gln Val Lys Lys Gln Cys Pro Pro Lys Asp Thr
65                  70                  75                  80
Ile Ile Pro Ala Gln Gln Lys Cys Pro Ser Ala Gln Gln Ala Ser Lys
                85                  90                  95
Ser Lys Gln Lys
            100


<210> 6147
<211> 1852
<212> DNA
<213> Homo sapiens

<400> 6147
ntgctaactc aaggagctac tgtacttaaa aacatgcaaa atatgttgta tttgtggcat
60
agttcatatt tacactatca taaaattatg gccgagaagt taaatattct aaatgtgtca
120
acatagttct ctgtaaaact gacttacttt ccaaatatat tttgaaataa aacaatataa
180
aaatgttttc tgttttttagg aatggtggaa agcagcagac ataattggag tggggttggat
240
aagcaaagtg atattcaaaa tttaaatgaa gagagaatct tagctttaca gctttgtggg
300
```

```
tggataaaga aaggaacgga tgtagacgtg gggccatttt tgaactccct tgtacaagaa
360
ggggaatggg aaagagctgc tgctgtggca ttgttcaact tggatattcg ccgagcaatc
420
caaatcctga atgaaggggc atcttctgaa aaaggagatc tgaatctcaa tgtggtagca
480
atggctttat cgggttatac ggatgagaag aactcccttt ggagagaaat gtgtgtagca
540
ctgcgattac agctaaataa cccgtatttg tgtgtcatgt ttgcatttct gacaagtgaa
600
acaggatctt acgatggagt tttgtatgaa aacaaagttg cagtacgtga cagagtggca
660
tttgcttgta aattccttag tgatactcag ttaaatagat acatcgaaaa gttgaccaat
720
gaaatgaaag aggctggaaa tttggaagga attttgctta caggccttac taaagatgga
780
gtggacttaa tggagagtta tgttgataga actggagatg ttcaaacagc aagttactgt
840
atgttacagg gttcaccttt agatgttctt aaagatgaaa gggttcagta ctggattgag
900
aattatagaa atttattaga tgcctggagg ttttggcata aacgagctga atttgatatt
960
cacaggagta agttggatcc cagttccaag cctttagcac aagtttttgt gagttgcaat
1020
ttctgtggca agtcaatctc ctacagctgt tcagctgtgc ctcatcaggg cagaggtttt
1080
agtcagtatg gtgtgagtgg ctcaccaacg aaatctaaag tcacaagttg tcctggctgt
1140
cgaaaaccac ttcctcgatg tgcgctttgt ctcattaata tgggaacacc agtttctagc
1200
tgtcctggag gaaccaaatc agatgaaaaa gtggacttga gcaaggacaa aaaattagcc
1260
caatttaaca actggtttac atggtgtcat aattgcaggc acggtggaca tgctggacat
1320
atgcttagtt ggttcaggga ccatgcagag tgccctgtgt ctgcatgcac gtgtaaatgt
1380
atgcagttgg atacaacggg gaatctggta cctgcagaga ctgtccagcc ataaaatgtt
1440
accaccttaa gagaaccctt caagtgtgga gctttctagt aggtgtcctt catagctcag
1500
aaacatacct cagaacaagc cattcatgac ttacctgtaa tgggaaaata aatcattcta
1560
tcagatcagc agtttttgatg tttgagtgat tttgatatgc ttcacagaga caaatgctgc
1620
caaaataaac atcgaagtat agacatgagt tctgttcagc aggttgaaaa gtctgattta
1680
gaaaaacttt ctaagttttg gttgaaatta tgaacactct agaagcagaa tttctggaag
1740
agccaagaac agactttgag cctatatctt caaagctgaa actggatatc tttcaataaa
1800
atatgtgcac ttttaaaata aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa
1852

<210> 6148
```

```
<211> 410
<212> PRT
<213> Homo sapiens

<400> 6148
Met Val Glu Ser Ser Arg His Asn Trp Ser Gly Leu Asp Lys Gln Ser
1               5                   10                  15
Asp Ile Gln Asn Leu Asn Glu Glu Arg Ile Leu Ala Leu Gln Leu Cys
                20                  25                  30
Gly Trp Ile Lys Lys Gly Thr Asp Val Asp Val Gly Pro Phe Leu Asn
            35                  40                  45
Ser Leu Val Gln Glu Gly Glu Trp Glu Arg Ala Ala Ala Val Ala Leu
        50                  55                  60
Phe Asn Leu Asp Ile Arg Arg Ala Ile Gln Ile Leu Asn Glu Gly Ala
65                  70                  75                  80
Ser Ser Glu Lys Gly Asp Leu Asn Leu Asn Val Val Ala Met Ala Leu
                85                  90                  95
Ser Gly Tyr Thr Asp Glu Lys Asn Ser Leu Trp Arg Glu Met Cys Ser
            100                 105                 110
Thr Leu Arg Leu Gln Leu Asn Asn Pro Tyr Leu Cys Val Met Phe Ala
        115                 120                 125
Phe Leu Thr Ser Glu Thr Gly Ser Tyr Asp Gly Val Leu Tyr Glu Asn
    130                 135                 140
Lys Val Ala Val Arg Asp Arg Val Ala Phe Ala Lys Phe Leu Ser
145                 150                 155                 160
Asp Thr Gln Leu Asn Arg Tyr Ile Glu Lys Leu Thr Asn Glu Met Lys
                165                 170                 175
Glu Ala Gly Asn Leu Glu Gly Ile Leu Leu Thr Gly Leu Thr Lys Asp
            180                 185                 190
Gly Val Asp Leu Met Glu Ser Tyr Val Asp Arg Thr Gly Asp Val Gln
        195                 200                 205
Thr Ala Ser Tyr Cys Met Leu Gln Gly Ser Pro Leu Asp Val Leu Lys
    210                 215                 220
Asp Glu Arg Val Gln Tyr Trp Ile Glu Asn Tyr Arg Asn Leu Leu Asp
225                 230                 235                 240
Ala Trp Arg Phe Trp His Lys Arg Ala Glu Phe Asp Ile His Arg Ser
                245                 250                 255
Lys Leu Asp Pro Ser Ser Lys Pro Leu Ala Gln Val Phe Val Ser Cys
            260                 265                 270
Asn Phe Cys Gly Lys Ser Ile Ser Tyr Ser Cys Ser Ala Val Pro His
        275                 280                 285
Gln Gly Arg Gly Phe Ser Gln Tyr Gly Val Ser Gly Ser Pro Thr Lys
    290                 295                 300
Ser Lys Val Thr Ser Cys Pro Gly Cys Arg Lys Pro Leu Pro Arg Cys
305                 310                 315                 320
Ala Leu Cys Leu Ile Asn Met Gly Thr Pro Val Ser Ser Cys Pro Gly
                325                 330                 335
Gly Thr Lys Ser Asp Glu Lys Val Asp Leu Ser Lys Asp Lys Lys Leu
            340                 345                 350
Ala Gln Phe Asn Asn Trp Phe Thr Trp Cys His Asn Cys Arg His Gly
        355                 360                 365
Gly His Ala Gly His Met Leu Ser Trp Phe Arg Asp His Ala Glu Cys
    370                 375                 380
Pro Val Ser Ala Cys Thr Cys Lys Cys Met Gln Leu Asp Thr Thr Gly
```

```
385                 390                 395                 400
Asn Leu Val Pro Ala Glu Thr Val Gln Pro
                    405                 410
```

<210> 6149
<211> 1949
<212> DNA
<213> Homo sapiens

<400> 6149
nggccgcggg ctgcatgggc agcgcccgcg cccgccgct gagccgtcgc ggagccgcgc
60
agccctcgga gcacgaatat atacagccct gctctgggac acacctccat tggatttaaa
120
agacagtcct cgtcagcact gactttcagc tatggaatcg cagacggttg atgatgaagc
180
gccggccgtg taaatgaaga tcgggtgagg agcaggacga tgcccaaggg tgggtgccct
240
aaagcaccac agcaggaaga gcttcccctc agcagcgaca tggtggagaa gcagactggg
300
aaaaaggata aagataaagt ttctctaacc aagaccccaa aactggagcg tggcgatggc
360
gggaaggagg tgaggagcg agccagcaag cggaagctgc ccttcaccgc gggcgccaat
420
ggggagcaga aggactcgga cacagagaag cagggccctg agcggaagag gattaagaag
480
gagcctgtca cccggaaggc cgggctgctg tttggcatgg ggctgtctgg aatccgagcc
540
ggctacccccc tctccgagcg ccagcaggtg gcccttctca tgcagatgac ggccgaggag
600
tctgccaaca gcccagtgga cacaacacca aagcacccct cccagtctac agtgtgtcag
660
aagggaacgc ccaactctgc ctcaaaaacc aaagataaac tgaacaagag aaacgagcgt
720
ggagagaccc gcctgcaccg agccgccatc cgcgggggacg cccggcgcat caaagagctc
780
atcagcgagg gggcagacgt caacgtcaag gacttcgcag gctggacggc gctgcacgag
840
gcctgtaacc ggggctacta cgacgtcgcg aagcagctgc tggctgcagg tgcggaggtg
900
aacaccaagg gcctagatga cgacacgcct ttgcacgacg ctgccaacaa cgggcactac
960
aaggtggtga agctgctgct gcggtacgga gggaacccgc agcagagcaa caggaaaggc
1020
gagacgcgc tgaaagtggc caactccccc acgatggtga acctcctgtt aggcaaaggc
1080
acttacactt ccagcgagga gagctcgacg gagagctcag aagaggaaga cgcaccatcc
1140
ttcgcacctt ccagttcagt cgacggcaac aacacggact ccgagttcga aaaaggcctc
1200
aagcacaagg ccaagaaccc agagccacag aaggccacgg ccccccgtcaa ggacgagtat
1260
gagtttgatg aggacgacga gcaggacagg gttcctccgg tggacgacaa gcacctattg
1320
```

```
aaaaaggact acagaaaaga aacgaaatcc aatagtttta tctctatacc caaaatggag
1380
gttaaaagtt acactaaaaa taacacgatt gcaccaaaga aagcgtccca tcgtatcctg
1440
tcagacacgt cggacgagga ggacgcgagt gtcaccgtgg ggacaggaga gaagctgaga
1500
ctctcggcac atacgatatt gcctggtagt aagacacgag agccttctaa tgccaagcag
1560
cagaaggaaa aaaataaagt gaaaagaag cgaaagaaag aaacaaaagg cagagaggtt
1620
cgcttcggaa agcggagcna tagttctgct cctcggagtc ggagagcgag tcctcagaga
1680
gtggggagga tgacagggac tctctgggga gctctggctg cctcaagggg tccccgctgg
1740
tgctgaagga cccctccctg ttcagctccc tctctgcctc ctccacctcg tctcacggga
1800
gctctgccgc ccagaagcag aaccccagcc acacagacca gcacaccaag cactggcgga
1860
cagacaattg gaaaaccatt tcttccccgg cttggtcaga ggtcagttct ttatcagact
1920
ccacaaggac gagactgaca agcgagtct
1949


<210> 6150
<211> 508
<212> PRT
<213> Homo sapiens

<400> 6150
Met Pro Lys Gly Gly Cys Pro Lys Ala Pro Gln Gln Glu Glu Leu Pro
1               5                   10                  15
Leu Ser Ser Asp Met Val Glu Lys Gln Thr Gly Lys Lys Asp Lys Asp
                20                  25                  30
Lys Val Ser Leu Thr Lys Thr Pro Lys Leu Glu Arg Gly Asp Gly Gly
        35                  40                  45
Lys Glu Val Arg Glu Arg Ala Ser Lys Arg Lys Leu Pro Phe Thr Ala
    50                  55                  60
Gly Ala Asn Gly Glu Gln Lys Asp Ser Asp Thr Glu Lys Gln Gly Pro
65                  70                  75                  80
Glu Arg Lys Arg Ile Lys Lys Glu Pro Val Thr Arg Lys Ala Gly Leu
                85                  90                  95
Leu Phe Gly Met Gly Leu Ser Gly Ile Arg Ala Gly Tyr Pro Leu Ser
                100                 105                 110
Glu Arg Gln Gln Val Ala Leu Leu Met Gln Met Thr Ala Glu Glu Ser
        115                 120                 125
Ala Asn Ser Pro Val Asp Thr Thr Pro Lys His Pro Ser Gln Ser Thr
    130                 135                 140
Val Cys Gln Lys Gly Thr Pro Asn Ser Ala Ser Lys Thr Lys Asp Lys
145                 150                 155                 160
Leu Asn Lys Arg Asn Glu Arg Gly Glu Thr Arg Leu His Arg Ala Ala
                165                 170                 175
Ile Arg Gly Asp Ala Arg Arg Ile Lys Glu Leu Ile Ser Glu Gly Ala
                180                 185                 190
Asp Val Asn Val Lys Asp Phe Ala Gly Trp Thr Ala Leu His Glu Ala
```

5333

```
            195                200                205
Cys Asn Arg Gly Tyr Tyr Asp Val Ala Lys Gln Leu Leu Ala Ala Gly
    210                215                220
Ala Glu Val Asn Thr Lys Gly Leu Asp Asp Asp Thr Pro Leu His Asp
225                230                235                240
Ala Ala Asn Asn Gly His Tyr Lys Val Val Lys Leu Leu Leu Arg Tyr
            245                250                255
Gly Gly Asn Pro Gln Gln Ser Asn Arg Lys Gly Glu Thr Pro Leu Lys
    260                265                270
Val Ala Asn Ser Pro Thr Met Val Asn Leu Leu Leu Gly Lys Gly Thr
    275                280                285
Tyr Thr Ser Ser Glu Glu Ser Ser Thr Glu Ser Ser Glu Glu Glu Asp
    290                295                300
Ala Pro Ser Phe Ala Pro Ser Ser Ser Val Asp Gly Asn Asn Thr Asp
305                310                315                320
Ser Glu Phe Glu Lys Gly Leu Lys His Lys Ala Lys Asn Pro Glu Pro
            325                330                335
Gln Lys Ala Thr Ala Pro Val Lys Asp Glu Tyr Glu Phe Asp Glu Asp
            340                345                350
Asp Glu Gln Asp Arg Val Pro Pro Val Asp Asp Lys His Leu Leu Lys
    355                360                365
Lys Asp Tyr Arg Lys Glu Thr Lys Ser Asn Ser Phe Ile Ser Ile Pro
    370                375                380
Lys Met Glu Val Lys Ser Tyr Thr Lys Asn Asn Thr Ile Ala Pro Lys
385                390                395                400
Lys Ala Ser His Arg Ile Leu Ser Asp Thr Ser Asp Glu Glu Asp Ala
            405                410                415
Ser Val Thr Val Gly Thr Gly Glu Lys Leu Arg Leu Ser Ala His Thr
    420                425                430
Ile Leu Pro Gly Ser Lys Thr Arg Glu Pro Ser Asn Ala Lys Gln Gln
    435                440                445
Lys Glu Lys Asn Lys Val Lys Lys Lys Arg Lys Lys Glu Thr Lys Gly
    450                455                460
Arg Glu Val Arg Phe Gly Lys Arg Ser Xaa Ser Ser Ala Pro Arg Ser
465                470                475                480
Arg Arg Ala Ser Pro Gln Arg Val Gly Arg Met Thr Gly Thr Leu Trp
            485                490                495
Gly Ala Leu Ala Ala Ser Arg Gly Pro Arg Trp Cys
            500                505
```

<210> 6151
<211> 648
<212> DNA
<213> Homo sapiens

<400> 6151
ttttttttt tttttttga aggtgagaa atttattcag atttcttcat aattcccccc
60
aaaagctcca accacgttgc cagtccttgg gtgctgcagt tggtcgggga gaggggctgt
120
gtgaggtca ccttctggta gacggagacc cgcttttcag actctgtggc gcagcaggcg
180
ggccaggaac atttgggcca ctattgctct tagccctgcc gcgcctgact ttctctcctc
240

```
tactttcctt ccgaccgtag ggacaagtgt ggggatccgc tttgggctcc aaggccctgc
300
ccgcactggc agcaccaagc gggtgtagaa tgactggaag gagcagggaa ggaagatggg
360
tgtcaactgt cccggccagt ggctgcgtgc atgtgtgtgt gaacagggaa aaggccaccc
420
tctccatgt ttctcccgtc tcctcggttc tcctcggaga cccgcagggc tgcccgaggt
480
agctccgagt tgccctgggt cgctgggggct tggtccgcat cctcctccgc tagtccgctc
540
ccgcgttcca cagcgccccg ccgctcggtg tgcacgcact gcggcttaac ccagccgaca
600
aggcacgctt gccaaagagg cgcgggtgtg tgtgtgcggg gtccgcgg
648


<210> 6152
<211> 130
<212> PRT
<213> Homo sapiens

<400> 6152
Met Arg Thr Lys Pro Gln Arg Pro Arg Ala Thr Arg Ser Tyr Leu Gly
1               5                   10                  15
Gln Pro Cys Gly Ser Pro Arg Arg Thr Glu Glu Thr Gly Glu Thr Trp
            20                  25                  30
Glu Arg Val Ala Phe Ser Leu Phe Thr His Thr Cys Thr Gln Pro Leu
        35                  40                  45
Ala Gly Thr Val Asp Thr His Leu Pro Ser Leu Leu Leu Pro Val Ile
    50                  55                  60
Leu His Pro Leu Gly Ala Ala Ser Ala Gly Arg Ala Leu Glu Pro Lys
65                  70                  75                  80
Ala Asp Pro His Thr Cys Pro Tyr Gly Arg Lys Glu Ser Arg Gly Glu
                85                  90                  95
Lys Val Arg Arg Gly Arg Ala Lys Ser Asn Ser Gly Pro Asn Val Pro
            100                 105                 110
Gly Pro Pro Ala Ala Pro Gln Ser Leu Lys Ser Gly Ser Pro Ser Thr
        115                 120                 125
Arg Arg
    130


<210> 6153
<211> 1810
<212> DNA
<213> Homo sapiens

<400> 6153
gatgcagtta cctgtgtgga cttcagtatc aacacaaagc agctggccag tggtnccatg
60
gactcatgcc tcatggtctg gcacatgaag ctgcagtcac gcgcctaccg cttcactggc
120
cacaaggatg ccgtcacctg tgtgaacttc tctccttcgg gacacctgct tgcttccggc
180
tcccgagaca agactgtccg catctggtta cccaatgtca aaggtgagtc cactgtgttt
240
```

```
cgtgcacaca cagccacagt gaggagtgtc cacttctgca gtgatggcca gtccttcgtg
300
acagcctctg acgacaagac agtcaaagtg tgggcaactc atcgccagaa attcctgttc
360
tccctgagcc agcatatcaa ctgggtccgc tgtgccaagt tctccccga cgggcggctc
420
atcgtgtctg ccagtgatga caagactgtt aagctgtggg acaagacag ccgggaatgt
480
gtccactcgt attgtgagca tggcggcttt gtcacctatg tggacttcca ccccagtggg
540
acgtgcattg ccgctgccgg catggacaac acagtgaagg tgtgggacgt gcggactcac
600
cggctgctgc agcattatca gttgcacagt gcagcagtga acgggctctc tttccacccg
660
tcgggaaact acctgatcac agcctccagt gactcaaccc tgaagatcct ggacctgatg
720
gagggccggc tgctctacac actccacggg catcagggac cagccaccac tgttgccttt
780
tcaagaacgg gggagtattt tgcttctgga ggctctgatg aacaagtgat ggtttggaag
840
agtaactttg atattgttga tcatggagaa gtcacgaaag tgccggaggcc cccagccaca
900
ctggccagct ccatggggaa tctgccagaa gtggacttcc ctgtcccccc aggcagaggc
960
tggagtgtgg agtctgtgca gagccagccc caggagcccg tgagtgtgcc ccagacactg
1020
actagcacgc tggagcacat tgtgggccag ctggatgtcc tcactcagac agtctccatt
1080
ctggagcagc ggttgacact gacagagaac aagctgaagc agtgtctgga gaaccagcag
1140
ctaatcatgc agagagcaac accatgatca ggggagcagg aatcaggagc tcggtggatt
1200
tgcaggtggc aggccaggga tttgtaccat gggacttggg taaataaagg ggactgaact
1260
ctgtgggaat cacatccata ctggagccct ggattttgc agttctgccc tccaccttgc
1320
tatctgcacc aggaggctct ccacctggca gccagaggtc cccagtgggc cgggctcaca
1380
cacaaatgat gcttcagacc cgaatgagag gaccacattg tgcttaatgt aaaggagcca
1440
cttgaaaatg tctgctcctt cggggtcctg agattgtggc tcccctctg gaggaggtgg
1500
ctccacgatg ccttgatttt cactcatcat ttggacatgt gactggcttt tcctacctct
1560
gccatggtgt agaaattgat tgcacattga ttggatgagc cgggggtttt ctctaaatct
1620
gactaaaggc ccaaagtggg cccatctgag tcaggtttgt tgagaacaag ccctctcaag
1680
tgggtggtgg cttttcagtg gccctgattt ctgttccaca cgtgttcact ggagccaggt
1740
gacttcctcc ttgcgtgagt gagggcacag gaatctcaaa attaaacctg acttcattgc
1800
aaaaaaaaaa
1810
```

```
<210> 6154
<211> 388
<212> PRT
<213> Homo sapiens

<400> 6154
Asp Ala Val Thr Cys Val Asp Phe Ser Ile Asn Thr Lys Gln Leu Ala
1               5                   10                  15
Ser Gly Xaa Met Asp Ser Cys Leu Met Val Trp His Met Lys Leu Gln
            20                  25                  30
Ser Arg Ala Tyr Arg Phe Thr Gly His Lys Asp Ala Val Thr Cys Val
        35                  40                  45
Asn Phe Ser Pro Ser Gly His Leu Leu Ala Ser Gly Ser Arg Asp Lys
    50                  55                  60
Thr Val Arg Ile Trp Val Pro Asn Val Lys Gly Glu Ser Thr Val Phe
65                  70                  75                  80
Arg Ala His Thr Ala Thr Val Arg Ser Val His Phe Cys Ser Asp Gly
            85                  90                  95
Gln Ser Phe Val Thr Ala Ser Asp Asp Lys Thr Val Lys Val Trp Ala
            100                 105                 110
Thr His Arg Gln Lys Phe Leu Phe Ser Leu Ser Gln His Ile Asn Trp
        115                 120                 125
Val Arg Cys Ala Lys Phe Ser Pro Asp Gly Arg Leu Ile Val Ser Ala
    130                 135                 140
Ser Asp Asp Lys Thr Val Lys Leu Trp Asp Lys Ser Ser Arg Glu Cys
145                 150                 155                 160
Val His Ser Tyr Cys Glu His Gly Gly Phe Val Thr Tyr Val Asp Phe
            165                 170                 175
His Pro Ser Gly Thr Cys Ile Ala Ala Ala Gly Met Asp Asn Thr Val
        180                 185                 190
Lys Val Trp Asp Val Arg Thr His Arg Leu Leu Gln His Tyr Gln Leu
    195                 200                 205
His Ser Ala Ala Val Asn Gly Leu Ser Phe His Pro Ser Gly Asn Tyr
    210                 215                 220
Leu Ile Thr Ala Ser Ser Asp Ser Thr Leu Lys Ile Leu Asp Leu Met
225                 230                 235                 240
Glu Gly Arg Leu Leu Tyr Thr Leu His Gly His Gln Gly Pro Ala Thr
            245                 250                 255
Thr Val Ala Phe Ser Arg Thr Gly Glu Tyr Phe Ala Ser Gly Gly Ser
        260                 265                 270
Asp Glu Gln Val Met Val Trp Lys Ser Asn Phe Asp Ile Val Asp His
    275                 280                 285
Gly Glu Val Thr Lys Val Pro Arg Pro Ala Thr Leu Ala Ser Ser
    290                 295                 300
Met Gly Asn Leu Pro Glu Val Asp Phe Pro Val Pro Pro Gly Arg Gly
305                 310                 315                 320
Trp Ser Val Glu Ser Val Gln Ser Gln Pro Gln Glu Pro Val Ser Val
            325                 330                 335
Pro Gln Thr Leu Thr Ser Thr Leu Glu His Ile Val Gly Gln Leu Asp
        340                 345                 350
Val Leu Thr Gln Thr Val Ser Ile Leu Glu Gln Arg Leu Thr Leu Thr
    355                 360                 365
Glu Asp Lys Leu Lys Gln Cys Leu Glu Asn Gln Gln Leu Ile Met Gln
```

```
      370                      375                      380
Arg Ala Thr Pro
385


<210> 6155
<211> 995
<212> DNA
<213> Homo sapiens


<400> 6155
aacagccaca gacgtatgtg taatatgatg ggctttagaa tgtacctgca aagcagtttt
60
tttttttttt ccatttggag gaaaaaagat gaaccaaaaa agactgaatt gggatgctaa
120
aataacagcg atttattatt aaggaaatga tacgcttttg tcccattcaa ataatgtttt
180
tattcccctt ttctttattc ttgggaggtt cctattgttg tgcaggtcg ttttcactga
240
acgatttta aaggtattca ccagtcccac gtgtgaccgg ttgcattttt actgtgcagg
300
accatcgtga agcctgtggc caaagagttt gatccagaca tggtcttagt atctgctgga
360
tttgatgcat tggaaggcca caccctcct ctaggagggt acaaagtgac ggcaaaatgt
420
tttggtcatt tgacgaagca attgatgaca ttggctgatg gacgtgtggt gttggctcta
480
gaaggaggac atgatctcac agccatctgt gatgcatcag aagcctgtgt aaatgccctt
540
ctaggaaatg agctggagc acttgcagaa gatattctcc accaaagccc gaatatgaat
600
gctgttattt ctttacagaa gatcattgaa attcaaaaac tgctggtgag cctatggaag
660
aggagccagc cttgtgaagt gccagtccc cctctgatat ttcctgtgtg tgacatcatt
720
gtgtatcccc ccaccccagt accctcagac atgtcttgtc tgctgcctgg gtggcacaga
780
ttcaatggaa cataaacact gggcacaaaa ttctgaacag cagcttcact tgttctttgg
840
atggacttga aagggcatta aagattcctt aaacgtaacc gctgtgattc tagagttaca
900
gtaaaccacg attggaagaa actgcttcca gcatgctttt aatatgctgg gtgacccact
960
cctagacacc aagtttgaac tagaaacatt cagta
995


<210> 6156
<211> 164
<212> PRT
<213> Homo sapiens


<400> 6156
Thr Ile Val Lys Pro Val Ala Lys Glu Phe Asp Pro Asp Met Val Leu
 1               5                   10                  15
Val Ser Ala Gly Phe Asp Ala Leu Glu Gly His Thr Pro Pro Leu Gly
```

```
              20                    25                    30
Gly Tyr Lys Val Thr Ala Lys Cys Phe Gly His Leu Thr Lys Gln Leu
         35                    40                    45
Met Thr Leu Ala Asp Gly Arg Val Val Leu Ala Leu Glu Gly Gly His
     50                    55                    60
Asp Leu Thr Ala Ile Cys Asp Ala Ser Glu Ala Cys Val Asn Ala Leu
65                    70                    75                    80
Leu Gly Asn Glu Leu Glu Pro Leu Ala Glu Asp Ile Leu His Gln Ser
                 85                    90                    95
Pro Asn Met Asn Ala Val Ile Ser Glu Leu Gln Lys Ile Ile Glu Ile Gln
             100                   105                   110
Lys Leu Leu Val Ser Leu Trp Lys Arg Ser Gln Pro Cys Glu Val Pro
         115                   120                   125
Ser Pro Pro Leu Ile Phe Pro Val Cys Asp Ile Ile Val Tyr Pro Pro
     130                   135                   140
Thr Pro Val Pro Ser Asp Met Ser Cys Leu Leu Pro Gly Trp His Arg
145                   150                   155                   160
Phe Asn Gly Thr


<210> 6157
<211> 2135
<212> DNA
<213> Homo sapiens

<400> 6157
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300
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360
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420
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480
gtccacaagg cagtgctgca tgatgggcgg acggtggccg tgaaggtcca gcacccaaag
540
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600
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660
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720
catttttgact tcttgaaggt ccccgaatc cactgggacc tgtccacgga gcgggtcctc
780
ctgatggagt ttgtggatgg cgggcaggtc aatgacagag actacatgga gaggaacaag
840
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atcgacgtca atgagatctc acgccacctg ggcaagatgt atagtgagat gatcttcgtc
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1320
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1440
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1620
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1680
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1800
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1920
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1980
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2040
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2100
tgtgtttcaa taaaaactcc ttcaaggttg aaaaa
2135

<210> 6158
<211> 455
<212> PRT
<213> Homo sapiens

<400> 6158
Met Ala Arg Lys Ala Leu Lys Leu Ala Ser Trp Thr Ser Met Ala Leu
1               5                   10                  15
Ala Ala Ser Gly Ile Tyr Phe Tyr Ser Asn Lys Tyr Leu Asp Pro Asn
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              20                  25                  30
Asp Phe Gly Ala Val Arg Val Gly Arg Ala Val Ala Thr Thr Ala Val
     35                  40                  45
Ile Ser Tyr Asp Tyr Leu Thr Ser Leu Lys Ser Val Pro Tyr Gly Ser
     50                  55                  60
Glu Glu Tyr Leu Gln Leu Arg Ser Lys Ile His Asp Leu Phe Gln Ser
65                  70                  75                  80
Phe Asp Asp Thr Pro Leu Gly Thr Ala Ser Leu Ala Gln Val His Lys
                 85                  90                  95
Ala Val Leu His Asp Gly Arg Thr Val Ala Val Lys Val Gln His Pro
                100                 105                 110
Lys Val Arg Ala Gln Ser Ser Lys Asp Ile Leu Leu Met Glu Val Leu
            115                 120                 125
Val Leu Ala Val Lys Gln Leu Phe Pro Glu Phe Glu Phe Met Trp Leu
        130                 135                 140
Val Asp Glu Ala Lys Lys Asn Leu Pro Leu Glu Leu Asp Phe Leu Asn
145                 150                 155                 160
Glu Gly Arg Asn Ala Glu Lys Val Ser Gln Met Leu Arg His Phe Asp
                165                 170                 175
Phe Leu Lys Val Pro Arg Ile His Trp Asp Leu Ser Thr Glu Arg Val
            180                 185                 190
Leu Leu Met Glu Phe Val Asp Gly Gly Gln Val Asn Asp Arg Asp Tyr
        195                 200                 205
Met Glu Arg Asn Lys Ile Asp Val Asn Glu Ile Ser Arg His Leu Gly
    210                 215                 220
Lys Met Tyr Ser Glu Met Ile Phe Val Asn Gly Phe Val His Cys Asp
225                 230                 235                 240
Pro His Pro Gly Asn Val Leu Val Arg Lys His Pro Gly Thr Gly Lys
                245                 250                 255
Ala Glu Ile Val Leu Leu Asp His Gly Leu Tyr Gln Met Leu Thr Glu
            260                 265                 270
Glu Phe Arg Leu Asn Tyr Cys His Leu Trp Gln Ser Leu Ile Trp Thr
        275                 280                 285
Asp Met Lys Arg Val Lys Glu Tyr Ser Gln Arg Leu Gly Ala Gly Asp
    290                 295                 300
Leu Tyr Pro Leu Phe Ala Cys Met Leu Thr Ala Arg Ser Trp Asp Ser
305                 310                 315                 320
Val Asn Arg Gly Ile Ser Gln Ala Pro Val Thr Ala Thr Glu Asp Leu
            325                 330                 335
Glu Ile Arg Asn Asn Ala Ala Asn Tyr Leu Pro Gln Ile Ser His Leu
        340                 345                 350
Leu Asn His Val Pro Arg Gln Met Leu Leu Ile Leu Lys Thr Asn Asp
    355                 360                 365
Leu Leu Arg Gly Ile Glu Ala Ala Leu Gly Thr Arg Ala Ser Ala Ser
370                 375                 380
Ser Phe Leu Asn Met Ser Arg Cys Cys Ile Arg Ala Leu Ala Glu His
385                 390                 395                 400
Lys Lys Lys Asn Thr Cys Ser Phe Phe Arg Arg Thr Gln Ile Ser Phe
            405                 410                 415
Ser Glu Ala Phe Asn Leu Trp Gln Ile Asn Leu His Glu Leu Ile Leu
        420                 425                 430
Arg Val Lys Gly Leu Lys Leu Ala Asp Arg Val Leu Ala Leu Ile Cys
    435                 440                 445
Trp Leu Phe Pro Ala Pro Leu
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          450   455

<210> 6159
<211> 4310
<212> DNA
<213> Homo sapiens

<400> 6159
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120
ttcatcatca ccctgggctg caacagcgtc ctcatccagt tcgccacacc caacgatttc
180
tgttccttct acaacatcct gaaaacctgc cggggccaca ccctggagcg gtctgtgttc
240
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300
cagcagcaga acatgatgca ggactacgtg cggacaggca cctaccagcg cgccatcctg
360
caaaaccaca ccgacttcaa ggacaagatc gttcttgatg ttggctgtgg ctctgggatc
420
ctgtcgtttt ttgccgccca agctggagca cggaaaatct acgcggtgga ggccagcacc
480
atggcccagc acgctgaggt cttggtgaag agtaacaacc tgacggaccg catcgtggtc
540
atcccgggca aggtggagga ggtgtcactc cccgagcagg tggacatcat catctcggag
600
cccatgggct acatgctctt caacgacgcg catgctggaga gctacctcca cgccaagaag
660
tacctgaagc ccagcggaaa catgtttcct accattggtg acgtccacct tgcacccttc
720
acggatgaac agctctacat ggagcagttc accaaggcca acttctggta ccagccatct
780
ttccatggag tggacctgtc ggccctccga ggtgccgcgg tggatgagta tttccggcag
840
cctgtggtgg acacatttga catccggatc ctgatggcca agtctgtcaa gtacacggtg
900
aacttcttag aagccaaaga aggagatttg cacaggatag aaatccatt caaattccac
960
atgctgcatt cagggctggt ccacggcctg gctttctggt ttgacgttgc tttcatcggc
1020
tccataatga ccgtgtggct gtccacagcc ccgacagagc ccctgacca ctggtaccag
1080
gtgcggtgcc tgttccagtc accactgttc gccaaggcag gggacacgct ctcagggaca
1140
tgtctgctta ttgccaacaa aagacagagc tacgacatca gtattgtggc ccaggtggac
1200
cagaccggct ccaagtccag taacctcctg gatctgaaaa acccctctt tagatacacg
1260
ggcacaacgc cctcacccc acccggctcc cactacacat ctccctcgga aaacatgtgg
1320
aacacgggca gcacctacaa cctcagcagc gggatggccg tggcagggat gccgaccgcc
1380

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tatgacttga gcagtgttat tgccagtggc tccagcgtgg gccacaacaa cctgattcct
1440
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1560
tatgcagtca acagccagtt caccatgggc ggccccgcca tctccatggc gtcgcccatg
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1800
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1860
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1920
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1980
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2100
taattttatt tttttatgaa aagaaccagt gtcaatccgc agaccctctg tgaagccagg
2160
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2220
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2280
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2340
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2460
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2760
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2820
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2880
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2940
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3000
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3120
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3300
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3360
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3420
tgaagacaaa gaggggagtga ccgtagatgc acacagtctc caggaaggtg tagggcccca
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3540
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3660
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4310

<210> 6160
<211> 551
<212> PRT
<213> Homo sapiens

<400> 6160
Leu Glu Val Arg Ala Gly Pro Asp Ser Ala Gly Ile Ala Leu Tyr Ser
 1               5                   10                  15
His Glu Asp Val Cys Val Phe Lys Cys Ser Val Ser Arg Glu Thr Glu
```

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              20                    25                    30
Cys Ser Arg Val Gly Lys Gln Ser Phe Ile Ile Thr Leu Gly Cys Asn
          35                    40                    45
Ser Val Leu Ile Gln Phe Ala Thr Pro Asn Asp Phe Cys Ser Phe Tyr
          50                    55                    60
Asn Ile Leu Lys Thr Cys Arg Gly His Thr Leu Glu Arg Ser Val Phe
65                    70                    75                    80
Ser Glu Arg Thr Glu Glu Ser Ser Ala Val Gln Tyr Phe Gln Phe Tyr
                  85                    90                    95
Gly Tyr Leu Ser Gln Gln Asn Met Met Gln Asp Tyr Val Arg Thr
          100                   105                   110
Gly Thr Tyr Gln Arg Ala Ile Leu Gln Asn His Thr Asp Phe Lys Asp
          115                   120                   125
Lys Ile Val Leu Asp Val Gly Cys Gly Ser Gly Ile Leu Ser Phe Phe
130                   135                   140
Ala Ala Gln Ala Gly Ala Arg Lys Ile Tyr Ala Val Glu Ala Ser Thr
145                   150                   155                   160
Met Ala Gln His Ala Glu Val Leu Val Lys Ser Asn Asn Leu Thr Asp
                  165                   170                   175
Arg Ile Val Val Ile Pro Gly Lys Val Glu Glu Val Ser Leu Pro Glu
          180                   185                   190
Gln Val Asp Ile Ile Ile Ser Glu Pro Met Gly Tyr Met Leu Phe Asn
          195                   200                   205
Glu Arg Met Leu Glu Ser Tyr Leu His Ala Lys Lys Tyr Leu Lys Pro
          210                   215                   220
Ser Gly Asn Met Phe Pro Thr Ile Gly Asp Val His Leu Ala Pro Phe
225                   230                   235                   240
Thr Asp Glu Gln Leu Tyr Met Glu Gln Phe Thr Lys Ala Asn Phe Trp
                  245                   250                   255
Tyr Gln Pro Ser Phe His Gly Val Asp Leu Ser Ala Leu Arg Gly Ala
          260                   265                   270
Ala Val Asp Glu Tyr Phe Arg Gln Pro Val Val Asp Thr Phe Asp Ile
275                   280                   285
Arg Ile Leu Met Ala Lys Ser Val Lys Tyr Thr Val Asn Phe Leu Glu
290                   295                   300
Ala Lys Glu Gly Asp Leu His Arg Ile Glu Ile Pro Phe Lys Phe His
305                   310                   315                   320
Met Leu His Ser Gly Leu Val His Gly Leu Ala Phe Trp Phe Asp Val
                  325                   330                   335
Ala Phe Ile Gly Ser Ile Met Thr Val Trp Leu Ser Thr Ala Pro Thr
          340                   345                   350
Glu Pro Leu Thr His Trp Tyr Gln Val Arg Cys Leu Phe Gln Ser Pro
          355                   360                   365
Leu Phe Ala Lys Ala Gly Asp Thr Leu Ser Gly Thr Cys Leu Leu Ile
          370                   375                   380
Ala Asn Lys Arg Gln Ser Tyr Asp Ile Ser Ile Val Ala Gln Val Asp
385                   390                   395                   400
Gln Thr Gly Ser Lys Ser Ser Asn Leu Leu Asp Leu Lys Asn Pro Phe
          405                   410                   415
Phe Arg Tyr Thr Gly Thr Thr Pro Ser Pro Pro Pro Gly Ser His Tyr
          420                   425                   430
Thr Ser Pro Ser Glu Asn Met Trp Asn Thr Gly Ser Thr Tyr Asn Leu
          435                   440                   445
Ser Ser Gly Met Ala Val Ala Gly Met Pro Thr Ala Tyr Asp Leu Ser
```

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      450                     455                     460
Ser Val Ile Ala Ser Gly Ser Ser Val Gly His Asn Asn Leu Ile Pro
465                     470                     475                     480
Leu Ala Asn Thr Gly Ile Val Asn His Thr His Ser Arg Met Gly Ser
                485                     490                     495
Ile Met Ser Thr Gly Ile Val Gln Gly Ser Ser Gly Ala Gln Gly Ser
                500                     510
Gly Gly Gly Ser Thr Ser Ala His Tyr Ala Val Asn Ser Gln Phe Thr
        515                     520                     525
Met Gly Gly Pro Ala Ile Ser Met Ala Ser Pro Met Ser Ile Pro Thr
        530                     535                     540
Asn Thr Met His Tyr Gly Ser
545                     550
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<210> 6161
<211> 1489
<212> DNA
<213> Homo sapiens

<400> 6161
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ggctgcatga tcttcagcag attcagtaca gagggaagtg agctgtggga gaggaaggag
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gatggggaa atggcaagaa aaggagcacc ctgcttagaa agggaacgga gccgggtgtg
120
gtggctcacg cctgcaatcc anacaccttg ggaggccgaa gcaaggagat cacctgagcc
180
caagagtttg agaccaccca catagcaaga ccccatctct atttttggga aaaaaaaaaa
240
aaaagcagca accagcagga tgggtggaaa aaagttgctg aaggctcttc aagatcctct
300
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360
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420
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480
caggactggc cagaggaagg agaggagatc aaggcaagca tgaggcactt gggagatgca
540
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660
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720
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780
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840
cctgtgctgc gggcttttca cacacagct cttagacgct tagcctgtga ggcgggtgct
900
gttgtccttc cttcccattt tgcaactgag caaacagcct gaaagagaca aaaaccaggt
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1020
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tggccaggtg gggttgtgca gtgaggggg gaaggagaat agcccccaaa aatgctgccg
1080
gaatggtaaa gggcctggac tgcaaagcta gtgacttgag ctttattttg tggcactgga
1140
ggttttccca gtcattgtaa tgatacaatc agatttgcgt tgtcttcaag ttaccatggt
1200
aaccgtactt ccacccacca agagtggatt ggagaaggca aaactagggc agagaagcca
1260
gggagtgttg agaaggtctg aacccagaca gtgggcagct gggccccaag acggatgggg
1320
gactccagaa gcgtggagct ggcagagaga aacctgcccg gggcatcaga gaaaagggcg
1380
actgtgcagg aacagagtag atgaggtggg gaacctttgg gtaagaagag ctgaatcagg
1440
agcattgagg cagcggtttt caaacctcag aagcaacagc agggccggc
1489


<210> 6162
<211> 58
<212> PRT
<213> Homo sapiens

<400> 6162
Gly Cys Met Ile Phe Ser Arg Phe Ser Thr Glu Gly Ser Glu Leu Trp
1               5                   10                  15
Glu Arg Lys Glu Asp Gly Gly Asn Gly Lys Lys Arg Ser Thr Leu Leu
            20                  25                  30
Arg Lys Gly Thr Glu Pro Gly Val Val Ala His Ala Cys Asn Pro Xaa
        35                  40                  45
Thr Leu Gly Gly Arg Ser Lys Glu Ile Thr
    50                  55


<210> 6163
<211> 713
<212> DNA
<213> Homo sapiens

<400> 6163
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120
caggtgctga gcaaggaagg gctgggaggc tcaagcaaaa tctacaagaa aaatctaaag
180
gggcccagcc tctgccagga aaagcaggcc tggctctgct gaaacccaa tcacgctctg
240
atggataccg gtacctgggc aaggataccg tggatggact tgattcttct ctcctgaaat
300
gtacgagaag gtgcatgcgg ggatttcggc tgcctgaaaa gcaaccctct aaaacccgag
360
tgtcatttt agaatcaaaa aggaaggaag gcagtggctg gctgcactgg tcagtaacga
420
gatctggagc ttttcgcctt aaggtcactg tttaaaactc tgccctgggt cagttgtaac
480
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agaaagtcac aactccctca caggcatcag ggtgcaactt tgaatgccaa gaggggctgt
540
gtctgttggt taccacgcgg cgagctcccg ggacacctcc tgacacctcc tgacagtgtc
600
tctttctcta ggagtctcct ctcttcccac ccaccatggc ggcctggcct ggaggggagg
660
cattggggac tgagtccttc cccgacaggg agtctctctc ccccctggcg cgc
713

<210> 6164
<211> 120
<212> PRT
<213> Homo sapiens

<400> 6164
Met Trp Val Thr Val Thr Gln Trp Val Thr Gly Ala Glu Gln Gly Arg
1   5   10   15
Ala Gly Arg Leu Lys Gln Asn Leu Gln Glu Lys Ser Lys Gly Ala Gln
            20   25   30
Pro Leu Pro Gly Lys Ala Gly Leu Ala Leu Leu Lys Pro Gln Ser Arg
        35   40   45
Ser Asp Gly Tyr Arg Tyr Leu Gly Lys Asp Thr Val Asp Gly Leu Asp
    50   55   60
Ser Ser Leu Leu Lys Cys Thr Arg Arg Cys Met Arg Gly Phe Arg Leu
65   70   75   80
Pro Glu Lys Gln Pro Ser Lys Thr Arg Val Ser Phe Leu Glu Ser Lys
                85   90   95
Arg Lys Glu Gly Ser Gly Trp Leu His Trp Ser Val Thr Arg Ser Gly
            100   105   110
Ala Phe Arg Leu Lys Val Thr Val
        115   120

<210> 6165
<211> 1004
<212> DNA
<213> Homo sapiens

<400> 6165
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aagctgttcg gggctggagg gggtaaggcc ggcaagggcc gcccgacccc ccaggaggcc
120
atccagcggc tgcgggacac ggaagagatg ttaagcaaga aacaggagtt cctggagaag
180
aaaatcgagc aggagctgac ggccgccaag aagcacggca ccaaaaacaa gcgcgcggcc
240
ctccaggcac tgaagcgtaa gaagaggtat gagaagcagc tggcgcagat cgacggcaca
300
ttatcaacca tcgagttcca gcgggaggcc ctggagaatg ccaacaccaa caccgaggtg
360
ctcaagaaca tgggctatgc cgccaaggcc atgaaggcgg cccatgacaa catggcacatc
420
gataaagttg atgagttaat gcaggacatt gctgaccagc aagaacttgc agaggagatt
480

```
tcaacagcaa tttcgaaacc tgtagggttt ggagaagagt ttgacgagga tgagctcatg
540
gcggaattag aagaactaga acaggaggaa ctagacaaga atttgctgga aatcagtgga
600
cccgaaacag tccctctacc aaatgttccc tctatagccc taccatcaaa acccgccaag
660
aagaaagaag aggaggacga cgacatgaag gaattggaga actgggctgg atccatgtaa
720
tggggtccag cgctggctgg gcccagacag actgtggtgg cctgcgcagc gagcaggcgt
780
gtgcgtgtgt ggggcaggca ggatgtggtg caggcaggtt ccatcgcttt cgactctcac
840
tccaaagcag tagggccgcg ttgctgctca ctctctgcat agcatggtct gcacctggga
900
gttggccggg gggagggggg cgagcgggct ggcacgtgcc tgctgtttat aatgttgaat
960
ttctgtaaaa taaactgtat ttgcaaatcc aaaaaaaaaa aaaa
1004
```

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<210> 6166
<211> 239
<212> PRT
<213> Homo sapiens

<400> 6166
Pro Ser Arg Ile Gly Arg Arg Arg Pro Ala Arg Arg Ala Ala Thr Met
1               5                   10                  15
Ser Val Phe Gly Lys Leu Phe Gly Ala Gly Gly Gly Lys Ala Gly Lys
                20                  25                  30
Gly Gly Pro Thr Pro Gln Glu Ala Ile Gln Arg Leu Arg Asp Thr Glu
            35                  40                  45
Glu Met Leu Ser Lys Lys Gln Glu Phe Leu Glu Lys Lys Ile Glu Gln
        50                  55                  60
Glu Leu Thr Ala Ala Lys Lys His Gly Thr Lys Asn Lys Arg Ala Ala
65                  70                  75                  80
Leu Gln Ala Leu Lys Arg Lys Lys Arg Tyr Glu Lys Gln Leu Ala Gln
                85                  90                  95
Ile Asp Gly Thr Leu Ser Thr Ile Glu Phe Gln Arg Glu Ala Leu Glu
            100                 105                 110
Asn Ala Asn Thr Asn Thr Glu Val Leu Lys Asn Met Gly Tyr Ala Ala
        115                 120                 125
Lys Ala Met Lys Ala Ala His Asp Asn Met Asp Ile Asp Lys Val Asp
    130                 135                 140
Glu Leu Met Gln Asp Ile Ala Asp Gln Gln Glu Leu Ala Glu Glu Ile
145                 150                 155                 160
Ser Thr Ala Ile Glu Ser Lys Pro Val Gly Phe Gly Glu Glu Phe Asp Glu
                165                 170                 175
Asp Glu Leu Met Ala Glu Leu Glu Glu Leu Glu Gln Glu Glu Leu Asp
            180                 185                 190
Lys Asn Leu Leu Glu Ile Ser Gly Pro Glu Thr Val Pro Leu Pro Asn
    195                 200                 205
Val Pro Ser Ile Ala Leu Pro Ser Lys Pro Ala Lys Lys Lys Glu Glu
    210                 215                 220
Glu Asp Asp Asp Met Lys Glu Leu Glu Asn Trp Ala Gly Ser Met
```

225   230   235

<210> 6167
<211> 1220
<212> DNA
<213> Homo sapiens

<400> 6167
ngccatacag cattttagtt ttgttctttc cattaactga agtcacgagg tatgcctcct
60
tggaaactcc aacagttaag agattctcat gtattccatg aaataaaaag caaagaaaaa
120
tcaaacttgt cttaatgaga tggaagtgtt ggatcaaaca ctgattgagc tgttctatgt
180
cctccacttc cccagtgcct tctctctcc cgggtctgcg cggacgcggc ctccttacct
240
catttgtcct cgcccctccc cgtccctcta cgcgtttttgg tccctgtttg gtgctttctg
300
tttgcagcta cggcagtgag tatgtatgtg acggacccg agtcacccgc ggcctgggac
360
ccctgcctac cctccgtctc gccagccgag ctgtggaact agcgcgtgcc ccctcgccga
420
cctcggcgtc tccggtccgc ccctcacttg tggtggggcg cagctcctgg tccctcagct
480
gcgcgccgcc ccacgcggcc gggctgcggg tctagggggt ccgcatctcc ctggctttcc
540
aagggctaag gtcgtgattc tagggcggct gggcgtccag ggcctcggtg ggggtggcgt
600
gtctgccctt tttatctccc cgcaaggccc ccagtcttct agggaagcca gtcagtgaag
660
cgcggaggtc cgggcgcgcc gagagagagt ccagtctttg aggaccgagt agtcctgggc
720
cacctcccgc ctctgctgtc agaagcagca gctgccgccg tggaatccaa aatttcggga
780
gctgtgaccc tttcctcatg taaaacgagt agtcttggac gatctgggca taggaaccaa
840
tcagaaacaa tcgcttcagc aatcaagacc attgttcatc atggaggaac ccatggatac
900
ctctgagcct ctatctgcat taccattcac tgggcagcag tcttttgagc caagtggcaa
960
atttggacag tatccatcga tgcagatgaa ccacatccag gcactgggga agtggaggac
1020
atagaacagc tcaatcagtg tttgatccaa cacttccatc tcattaaagac aagtttgatt
1080
tttctttgct ttttatttca tggaatacat gagaatctct taactgttgg agtttccaag
1140
gaggcatacc tcatgacttc agttaatgga aagaacaaaa ctaaatgct gtatggccaa
1200
agccacaaag ggaaggatcc
1220

<210> 6168
<211> 90
<212> PRT

<213> Homo sapiens

<400> 6168
Ala Lys Trp Gln Ile Trp Thr Val Ser Ile Asp Ala Asp Glu Pro His
1   5   10   15
Pro Gly Thr Gly Glu Val Glu Asp Ile Glu Gln Leu Asn Gln Cys Leu
            20   25   30
Ile Gln His Phe His Leu Ile Lys Thr Ser Leu Ile Phe Leu Cys Phe
        35   40   45
Leu Phe His Gly Ile His Glu Asn Leu Leu Thr Val Gly Val Ser Lys
    50   55   60
Glu Ala Tyr Leu Met Thr Ser Val Asn Gly Lys Asn Lys Thr Lys Met
65   70   75   80
Leu Tyr Gly Gln Ser His Lys Gly Lys Asp
                85   90

<210> 6169
<211> 720
<212> DNA
<213> Homo sapiens

<400> 6169
tgagggcttc gatcccttct ctgatttgct gtcagccatg aacggatgga tgtgatgcct
60
gctagccaaa aggcttccct ctgtgtgttg cagtcctgtg gcattatgca tgcccctcc
120
cagtgacccc aggctttta tggctgtgaa acacgttaaa atttcagggt aagacgtgac
180
ctttttgaggt gactataact gaagattgct ttacagaagc ccaaaaaggt ttttgagtc
240
atgatgcaag aatctgggac tgagacaaaa agtaacggtt cagccatcca gaatgggtcg
300
ggcggcagca accacttact agagtgcggc ggtcttcggg aggggcggtc caacggagag
360
acgcggccg tggacatcgg ggcagctgac ctcgcccacg cccagcagca gcagcaacag
420
tggcatctca taaaccatca gccctctagg agtcccagca gttggcttaa gagactaatt
480
tcaagcccct gggagttgga agtcctgcag gtccccttgtg gggagcagtt gctgagacga
540
agatgagtgg acctgtgtgt cagcctaacc cttccccatt ttgaataaaa ttattctttg
600
gagaaatggt tcccactgct ttcatgcaaa aataaaaatt aaacgaaaaa cagcttaagc
660
ctgtgaagaa ggaaatactg agctagccag caaaagagag aaagaagagg aggggagagg
720

<210> 6170
<211> 101
<212> PRT
<213> Homo sapiens

<400> 6170
Met Met Gln Glu Ser Gly Thr Glu Thr Lys Ser Asn Gly Ser Ala Ile

```
 1               5               10                    15
Gln Asn Gly Ser Gly Gly Ser Asn His Leu Leu Glu Cys Gly Gly Leu
             20                   25                   30
Arg Glu Gly Arg Ser Asn Gly Glu Thr Pro Ala Val Asp Ile Gly Ala
       35                   40                   45
Ala Asp Leu Ala His Ala Gln Gln Gln Gln Gln Gln Trp His Leu Ile
     50                   55                   60
Asn His Gln Pro Ser Arg Ser Pro Ser Ser Trp Leu Lys Arg Leu Ile
65                   70                   75                   80
Ser Ser Pro Trp Glu Leu Glu Val Leu Gln Val Pro Cys Gly Gly Gln
             85                   90                   95
Leu Leu Arg Arg Arg
             100
```

<210> 6171
<211> 1130
<212> DNA
<213> Homo sapiens

<400> 6171
nncccgctag gagttcctag taaagtggcg ggagccgcag ctatggagcc gcaggaggag
60
agagaaacgc aggttgctgc gtggttaaaa aaaatatttg gagatcatcc tattccacag
120
tatgaggtga acccacggac cacagagatt ttacatcacc tttcagaacg caacagggtc
180
cgggacaggg atgtctacct ggtaatagag gacttgaagc agaaagcaag tgaatacgag
240
tcagaagcca agtatcttca agaccttctc atggagagtg tgaattttc ccccgccaat
300
ctctctagca ctggttccag gtatctgaat gctttggttg acagtgcggt ggcccttgaa
360
acaaaggata cctcgctagc tagtttttatc cctgcagtga atgatttgac ctctgatctc
420
tttcgtacca aatccaaaag tgaagaaatc aagattgaac tggaaaaact tgaaaaaaat
480
ttaactgcaa ctttagtatt agaaaaatgt ctacaagagg atgtcaagaa agcagagttg
540
catctgtcta cagaaagggc caaagttgat aatcgtcgtc agaacatgga ctttctaaaa
600
gcaaagtcag aggaattcag atttggaatc aaggctgcag aggagcaact ttcagccaga
660
ggcatggatg cttctctgtc tcatcagtcc ttagtagcac tatcagagaa actggcaaga
720
ttaaagcaac agactatacc tttgaagaaa aaattggagt cctatttaga cttaatgccg
780
aatccgtctc ttgctcaagt gaaaattgaa gaagcaaagc gagaactaga tagcattgaa
840
gctgaactta caagaagagt agacatgatg gaactgtgac aaaagccaaa taaacatcct
900
tttccctaac aaagtaaatt gaataggact ttacagagtt cttttcctc ttggcatttc
960
ctaataacaa aactttctgt gttcttagat tacagaatat cataattgat agaatatggt
1020

ttcttactgt gtgttgcatt tttgtgccca aatacatagt tttcatatta aaaagccttt
1080
tctcttaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1130

<210> 6172
<211> 292
<212> PRT
<213> Homo sapiens

<400> 6172
Xaa Pro Leu Gly Val Pro Ser Lys Val Ala Gly Ala Ala Ala Met Glu
 1   5   10   15
Pro Gln Glu Glu Arg Glu Thr Gln Val Ala Ala Trp Leu Lys Lys Ile
                20   25   30
Phe Gly Asp His Pro Ile Pro Gln Tyr Glu Val Asn Pro Arg Thr Thr
            35   40   45
Glu Ile Leu His His Leu Ser Glu Arg Asn Arg Val Arg Asp Arg Asp
        50   55   60
Val Tyr Leu Val Ile Glu Asp Leu Lys Gln Lys Ala Ser Glu Tyr Glu
65   70   75   80
Ser Glu Ala Lys Tyr Leu Gln Asp Leu Leu Met Glu Ser Val Asn Phe
                85   90   95
Ser Pro Ala Asn Leu Ser Ser Thr Gly Ser Arg Tyr Leu Asn Ala Leu
                100   105   110
Val Asp Ser Ala Val Ala Leu Glu Thr Lys Asp Thr Ser Leu Ala Ser
        115   120   125
Phe Ile Pro Ala Val Asn Asp Leu Thr Ser Asp Leu Phe Arg Thr Lys
    130   135   140
Ser Lys Ser Glu Glu Ile Lys Ile Glu Leu Glu Lys Leu Glu Lys Asn
145   150   155   160
Leu Thr Ala Thr Leu Val Leu Glu Lys Cys Leu Gln Glu Asp Val Lys
                165   170   175
Lys Ala Glu Leu His Leu Ser Thr Glu Arg Ala Lys Val Asp Asn Arg
            180   185   190
Arg Gln Asn Met Asp Phe Leu Lys Ala Lys Ser Glu Glu Phe Arg Phe
        195   200   205
Gly Ile Lys Ala Ala Glu Glu Gln Leu Ser Ala Arg Gly Met Asp Ala
    210   215   220
Ser Leu Ser His Gln Ser Leu Val Ala Leu Ser Glu Lys Leu Ala Arg
225   230   235   240
Leu Lys Gln Gln Thr Ile Pro Leu Lys Lys Lys Leu Glu Ser Tyr Leu
                245   250   255
Asp Leu Met Pro Asn Pro Ser Leu Ala Gln Val Lys Ile Glu Glu Ala
            260   265   270
Lys Arg Glu Leu Asp Ser Ile Glu Ala Glu Leu Thr Arg Arg Val Asp
        275   280   285
Met Met Glu Leu
    290

<210> 6173
<211> 1483
<212> DNA
<213> Homo sapiens

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<400> 6173
agagagagag actagttctc tcttactcta ggcctttcgg tttgcgcgac ggggcaggaa
60
agcgtgcgtg cggctaagag agtgggcgct ctcgcggcgc tgacgatgga agaactggag
120
caaggcctgt tgatgcagcc atgggcgtgg ctacagcttg cagagaactc cctcttggcc
180
aaggtttta tcaccaagca gggctatgcc ttgttggttt cagatcttca acaggtgtgg
240
catgaacagg tggacactag tgtggtcagc cagcgagcca aggagctgaa caagcggctc
300
actgctcctc ctgcagcttt cctctgtcat ttggataatc tccttcgccc attgttgaag
360
gacgctgctc accctgcga agctaccttc tcctgtgatt gtgtggcaga tgcactgatt
420
ctacgggtgc gaagtgagct ctctggcctc cccttctatt ggaatttcca ctgcatgcta
480
gctagtcctt ccctggtctc ccaacatttg attcgtcctc tgatggggcat gagtctggca
540
ttacagtgcc aagtgaggga gctagcaacg ttacttcata tgaaagacct agagatccaa
600
gactaccagg agagtggggc tacgctgatt cgagatcgat tgaagacaga accatttgaa
660
gaaaattcct tcttggaaca atttatgata gagaaactgc cagaggcatg cagcattggt
720
gatggaaagc cctttgtcat gaatctgcag gatctgtata tggcagtcac cacacaagag
780
gtccaagtgg gacagaagca tcaaggcgct ggagatcctc atacctcaaa cagtgcttcc
840
ctgcaaggaa tcgatagcca atgtgtaaac cagccagaac aactggtctc ctcagcccca
900
accctctcag cacctgagaa agagtccacg ggtacttcag gccctctgca gagacctcag
960
ctgtcaaagg tcaaggaa gaatccaagg ggtctcttca gttaatctgt tgtggcctca
1020
gctgctgagg atggacttgg agaatagctt ccaagcttca ccttgaaaga agcttacatg
1080
gcagcaatat ttctaaaata gtgatacagt cagaggcctc ctgtaagggc gagagaactg
1140
aagttgatgt tgacaggccc acagggaatt ggccttccct gttcaagtgg aagccagtct
1200
ctgagaatcc cgtgctctcc tctcttttgg tggaggttct gtaggttcag gtttctacca
1260
tggactttag gtatataggg caagtcagca agaaagcacc acacactcag gaagccttgt
1320
ctaccttcc ctagcgtctc tagccagcca gccccagata ctcctcagag acccacttct
1380
ctcttttgca tggaataaaa agcactcaca gtccctgctt ttgggattaa aaaacaaaaa
1440
gaaaaaaaaa aaaaaaaaaa aaaaaaaaat cctcatgccg aat
1483

<210> 6174
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<211> 299
<212> PRT
<213> Homo sapiens

<400> 6174
Met Glu Glu Leu Glu Gln Gly Leu Leu Met Gln Pro Trp Ala Trp Leu
 1               5                   10                  15
Gln Leu Ala Glu Asn Ser Leu Leu Ala Lys Val Phe Ile Thr Lys Gln
                20                  25                  30
Gly Tyr Ala Leu Leu Val Ser Asp Leu Gln Gln Val Trp His Glu Gln
        35                  40                  45
Val Asp Thr Ser Val Val Ser Gln Arg Ala Lys Glu Leu Asn Lys Arg
    50                  55                  60
Leu Thr Ala Pro Pro Ala Ala Phe Leu Cys His Leu Asp Asn Leu Leu
65                  70                  75                  80
Arg Pro Leu Leu Lys Asp Ala Ala His Pro Ser Glu Ala Thr Phe Ser
                85                  90                  95
Cys Asp Cys Val Ala Asp Ala Leu Ile Leu Arg Val Arg Ser Glu Leu
                100                 105                 110
Ser Gly Leu Pro Phe Tyr Trp Asn Phe His Cys Met Leu Ala Ser Pro
        115                 120                 125
Ser Leu Val Ser Gln His Leu Ile Arg Pro Leu Met Gly Met Ser Leu
    130                 135                 140
Ala Leu Gln Cys Gln Val Arg Glu Leu Ala Thr Leu Leu His Met Lys
145                 150                 155                 160
Asp Leu Glu Ile Gln Asp Tyr Gln Glu Ser Gly Ala Thr Leu Ile Arg
                165                 170                 175
Asp Arg Leu Lys Thr Glu Pro Phe Glu Glu Asn Ser Phe Leu Glu Gln
        180                 185                 190
Phe Met Ile Glu Lys Leu Pro Glu Ala Cys Ser Ile Gly Asp Gly Lys
    195                 200                 205
Pro Phe Val Met Asn Leu Gln Asp Leu Tyr Met Ala Val Thr Thr Gln
    210                 215                 220
Glu Val Gln Val Gly Gln Lys His Gln Gly Ala Gly Asp Pro His Thr
225                 230                 235                 240
Ser Asn Ser Ala Ser Leu Gln Gly Ile Asp Ser Gln Cys Val Asn Gln
                245                 250                 255
Pro Glu Gln Leu Val Ser Ser Ala Pro Thr Leu Ser Ala Pro Glu Lys
        260                 265                 270
Glu Ser Thr Gly Thr Ser Gly Pro Leu Gln Arg Pro Gln Leu Ser Lys
    275                 280                 285
Val Lys Arg Lys Asn Pro Arg Gly Leu Phe Ser
    290                 295

<210> 6175
<211> 349
<212> DNA
<213> Homo sapiens

<400> 6175
acgcgtttgc cgggagatgc ggccgcttcg tcctctgcag ttaagaagct gggcgcgtcg
60
aggactggga tttcaaatat gcgtgcatta gagaatgact ttttcaattc tcccccaaga
120
```

```
aaaactgttc agtttggtgg aactgtgaca gaagtcttgc tgaagtacaa aaagggtgaa
180
acaaatgact ttgagttgtt gaagaaccag ctgttagatc cagacataaa gagattgcct
240
tggttgaata gaagtcaaac agtagtggaa gagtatttgg cttttcttgg taatcttgta
300
tcagcacaga ctgtttttcct cagaccgtgt ctcagcatga ttgcttccc
349


<210> 6176
<211> 90
<212> PRT
<213> Homo sapiens

<400> 6176
Met Arg Ala Leu Glu Asn Asp Phe Phe Asn Ser Pro Pro Arg Lys Thr
1               5                   10                  15
Val Gln Phe Gly Gly Thr Val Thr Glu Val Leu Leu Lys Tyr Lys Lys
            20                  25                  30
Gly Glu Thr Asn Asp Phe Glu Leu Leu Lys Asn Gln Leu Leu Asp Pro
        35                  40                  45
Asp Ile Lys Arg Leu Pro Trp Leu Asn Arg Ser Gln Thr Val Val Glu
    50                  55                  60
Glu Tyr Leu Ala Phe Leu Gly Asn Leu Val Ser Ala Gln Thr Val Phe
65                  70                  75                  80
Leu Arg Pro Cys Leu Ser Met Ile Ala Ser
                85                  90


<210> 6177
<211> 1536
<212> DNA
<213> Homo sapiens

<400> 6177
cggcccaacc atggcgtcct ccgcggccgg ctgcgtggtg atcgttggca gaattaaaac
60
tctgtaccca ttgaacaaca gctgctcatt tcccccagcc ccagccccctg gcatccaccc
120
ttctagcttt ctgtctctat gggtacctca gtggagtcat tgggcgaatg ggccatgctg
180
tttgccagtg gaggcttcca ggtgaaactc tatgacattg agcaacagca gataaggaac
240
gccctggaaa acatcagaaa ggagatgaag ttgctggagc aggcaggttc tctgaaaggc
300
tccctgagtg tggaagagca gctgtcactc atcagtggtt gtcccaatat ccaagaagca
360
gtagagggtg ccatgcacat tcaggaatgt gttccagaag atctagaact gaagaagaag
420
atttttgctc agttagattc catcattgat gatcgagtga tcttaagcag ttccacttct
480
tgtctcatgc cttccaagtt gtttgctggc ttggtccatg tgaagcaatg catcgtggct
540
catcctgtga atccgccata ctacatcccg ctggttgagc tggtcccca cccgggacg
600
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```
gcccctacga cagtggacag aacccacgcc ctgatgaaga agattgganc agtgccccat
660
gcgagtccag aaggaggtgg ccggcttcgt tctgaaccgc ctgcaatatg caatcatcag
720
cgaggcctgg cggctagtgg aggaaggaat ncgtgtctcc tagtgacctg gnaccttgtc
780
atgtcagaag ggttgggcat gcggtatgca ttcattggac ccctggaaac catgcatctc
840
aatgcagaag gtatgttaag ctactgcgac agatacagcg aaggcataaa acatgtccta
900
cagactttg gacccattcc agagtttcc agggccactg ctgagaaggt taaccaggac
960
atgtgcatga aggtccctga tgacccggag cacttagctg ccaggaggca gtggagggac
1020
gagtgcctca tgagactcgc caagttgaag agtcaagtgc agccccagtg aatttcttgt
1080
aatgcagctt ccactcctct cattggaggc cctatttggg aacactgcaa gcccttaatc
1140
agccctctgt gacataggta gcagcccacg gagatcctaa gctggctgtc ttgtgtgcag
1200
cctgagtggg gtggtgcagg ccggtagtct gcccgtcact ttggatcata gccctgggcc
1260
tggcggcaca gcagcacttg cgttctcggg gctgtcgatt tcctgccacc tgggcagata
1320
acctggagat ttccaccttt tcttttcagc ttgattgcat ttgactatat tttacagcca
1380
gtgattgtag tttcatgtta atatgtggca aaatattttt gtaattattt tctaatccct
1440
ttctgagtac tctgggggccc tgcatttatg aggcacctac cttcattttg ctaacgctta
1500
ttctgaataa aagtttttga ttccttaaaa aaaaaa
1536

<210> 6178
<211> 310
<212> PRT
<213> Homo sapiens

<400> 6178
Met Gly Thr Ser Val Glu Ser Leu Gly Glu Trp Ala Met Leu Phe Ala
 1               5                  10                  15
Ser Gly Gly Phe Gln Val Lys Leu Tyr Asp Ile Glu Gln Gln Gln Ile
            20                  25                  30
Arg Asn Ala Leu Glu Asn Ile Arg Lys Glu Met Lys Leu Leu Glu Gln
        35                  40                  45
Ala Gly Ser Leu Lys Gly Ser Leu Ser Val Glu Glu Gln Leu Ser Leu
        50                  55                  60
Ile Ser Gly Cys Pro Asn Ile Gln Glu Ala Val Glu Gly Ala Met His
65                  70                  75                  80
Ile Gln Glu Cys Val Pro Glu Asp Leu Glu Leu Lys Lys Lys Ile Phe
                85                  90                  95
Ala Gln Leu Asp Ser Ile Ile Asp Asp Arg Val Ile Leu Ser Ser Ser
                100                 105                 110
Thr Ser Cys Leu Met Pro Ser Lys Leu Phe Ala Gly Leu Val His Val
```

```
         115                  120                  125
Lys Gln Cys Ile Val Ala His Pro Val Asn Pro Pro Tyr Tyr Ile Pro
    130                  135                  140
Leu Val Glu Leu Val Pro His Pro Glu Thr Ala Pro Thr Thr Val Asp
145                  150                  155                  160
Arg Thr His Ala Leu Met Lys Lys Ile Gly Xaa Val Pro His Ala Ser
                165                  170                  175
Pro Glu Gly Gly Gly Arg Leu Arg Ser Glu Pro Pro Ala Ile Cys Asn
            180                  185                  190
His Gln Arg Gly Leu Ala Ala Ser Gly Gly Arg Asn Xaa Cys Leu Leu
        195                  200                  205
Val Thr Trp Xaa Leu Val Met Ser Glu Gly Leu Gly Met Arg Tyr Ala
    210                  215                  220
Phe Ile Gly Pro Leu Glu Thr Met His Leu Asn Ala Glu Gly Met Leu
225                  230                  235                  240
Ser Tyr Cys Asp Arg Tyr Ser Glu Gly Ile Lys His Val Leu Gln Thr
                245                  250                  255
Phe Gly Pro Ile Pro Glu Phe Ser Arg Ala Thr Ala Glu Lys Val Asn
            260                  265                  270
Gln Asp Met Cys Met Lys Val Pro Asp Asp Pro Glu His Leu Ala Ala
        275                  280                  285
Arg Arg Gln Trp Arg Asp Glu Cys Leu Met Arg Leu Ala Lys Leu Lys
    290                  295                  300
Ser Gln Val Gln Pro Gln
305                  310

<210> 6179
<211> 2940
<212> DNA
<213> Homo sapiens

<400> 6179
nnctgcaggt ggcgcgggag gctacgcgcg gggcgggtgc tgcttgctgc aggctctggg
60
gagtcgccat gcctacaaca cagcagtccc ctcaggatga gcaggaaaag ctcttggatg
120
aagccataca ggctgtgaag gtccagtcat tccaaatgaa gagatgcctg gacaaaaaca
180
agcttatgga tgctctaaaa catgcttcta atatgcttgg tgaactccgg acttctatgt
240
tatcaccaaa gagttactat gaactttata tggccatttc tgatgaactc cactacttgg
300
aggntctacc tgacagatga gtttgctaaa ggaaggaaag tggcagatct ctacgaactt
360
gtacagtatg ctggaaacat tatcccaagg ctttaccttt tgatcacagt tggagttgta
420
tatgtcaagt catttcctca gtccaggaag gatattttga aagatttggt agaaatgtgc
480
cgtggtgtgc aacatcccct gaggggtctg tttcttcgaa attccttct tcagtgtacc
540
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600
gattccatgg attttgtact gctcaacttt gcagaaatga acaagctctg ggtgcgaatg
660
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cagcatcagg gacatagccg agatagagaa aaaagagaac gagaaagaca agaactgaga
720
atttagtgg gaacaaattt ggtgcgcctc agtnncagtt ggaggtgtaa atgtggaacg
780
ttacaacaga ttgtttgac tggcatattg gagcaagttg taaactgtag ggatgctttg
840
gctcaagaat atctcatgga gtgtattatt caggtttcc ctgatgaatt tcacctccag
900
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960
ataatcattg ctttaattga tagattagct ttatttgctc accgtgaaga tggacctgga
1020
atcccagcgg atattaaact ttttgatata ttttcacagc aggtggctac agtgatacag
1080
tctagacaag acatgccttc agaggatgtt gtatctttac aagtctctct gattaatctt
1140
gccatgaaat gttaccctga tcgtgtggac tatgttgata aagttctaga aacaacagtg
1200
gagatattca ataagctcaa ccttgaacat attgctacca gtagtgcagt ttcaaaggaa
1260
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1320
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1380
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1440
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1500
gaccctgatc cagaagattt tgctgatgag cagagccttg tgggccgctt cattcatctg
1560
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1620
ggagctggtg gaaatcagcg gattcgcttc acactgccac ctttggtatt tgcagcttac
1680
cagctggctt ttcgatataa agagaattct aagtggatga caaatgggaa aagaaatgcc
1740
agaagatttt ttcatttgcc cnaccagact atcagtgctt tgatcaaagc agagctggca
1800
gaattgccct taagacttt tcttcaagga gcactagctg ctggggaaat tggttttgaa
1860
aatcatgaga cagtcgcata tgaattcatg tcccaggcat tttctctgta tgaagatgaa
1920
atcagcgatt ccaaagcaca gctagctgcc atcaccttga tcattggcac ttttgaaagg
1980
atgaagtgct tcagtgaaga gaatcatgaa cctctgagga ctcagtgtgc ccttgctgca
2040
tccaaacttc taaagaaacc tgatcagggc cgagctgagc acctgtgcac atctctttgg
2100
tctggcagaa acacggacaa aaatgggag gagcttcacg gaggcaagag ggtaatggag
2160
tgcctaaaaa aagctctaaa aatagcaaat cagtgcatgg acccctctct acaagtgcag
2220
cttttatag aaattctgaa cagatatatc tattttatg aaaaggaaaa tgatgcggta
2280
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acaattcagg ttttaaacca gcttatccaa aagattcgag aagacctccc gaatcttgaa
2340
tccagtgaag aaacagagca gattaacaaa cattttcata acacactgga gcatttgcgc
2400
ttgcggcggg aatcaccaga atccgagggg ccaatttatg aaggtctcat cctttaaaaa
2460
ggaaatagct caccatactc ctttccatgt acatccagtg agggtttttat tacgctaggt
2520
ttcccttcca tagattgtgc ctttcagaaa tgctgaggta ggtttcccat ttcttacctg
2580
tgatgtgttt tacccagcac ctccggacac tcaccttcag gaccttaata aaattattca
2640
cttggtaagt gttcaagtct ttctgatcac cccaagtagc atgactgatc tgcaatttttt
2700
agagcttttt ttaggcactc cattaccctc ttgcctccgt gaagctcctc cccatttttg
2760
tccgtgtttc tgccagacca gaagagatgt gcacaggtgc tcacagctcg gccctgatca
2820
ggtttctta gaagtttgga tgcagcaagg gcacactgag tcctcagagg ttcatgattc
2880
tcttcactga agcacttcat cctttcaaaa gtgccaatga tcaaggtgat ggcagctagc
2940
```

```
<210> 6180
<211> 751
<212> PRT
<213> Homo sapiens
```

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<400> 6180
Met Leu Leu Ile Cys Leu Val Asn Ser Gly Leu Leu Cys Tyr His Gln
1               5                   10                  15
Arg Val Thr Met Asn Phe Ile Trp Pro Phe Leu Met Asn Cys Thr Thr
            20                  25                  30
Trp Arg Xaa Tyr Leu Thr Asp Glu Phe Ala Lys Gly Arg Lys Val Ala
        35                  40                  45
Asp Leu Tyr Glu Leu Val Gln Tyr Ala Gly Asn Ile Ile Pro Arg Leu
    50                  55                  60
Tyr Leu Leu Ile Thr Val Gly Val Val Tyr Val Lys Ser Phe Pro Gln
65                  70                  75                  80
Ser Arg Lys Asp Ile Leu Lys Asp Leu Val Glu Met Cys Arg Gly Val
                85                  90                  95
Gln His Pro Leu Arg Gly Leu Phe Leu Arg Asn Tyr Leu Leu Gln Cys
                100                 105                 110
Thr Arg Asn Ile Leu Pro Asp Glu Val Gly Glu Pro Thr Asp Glu Glu Thr
            115                 120                 125
Thr Gly Asp Ile Ser Asp Ser Met Asp Phe Val Leu Leu Asn Phe Ala
    130                 135                 140
Glu Met Asn Lys Leu Trp Val Arg Met Gln His Gln Gly His Ser Arg
145                 150                 155                 160
Asp Arg Glu Lys Arg Glu Arg Glu Arg Gln Glu Leu Arg Ile Leu Val
                165                 170                 175
Gly Thr Asn Leu Val Arg Leu Ser Xaa Ser Trp Arg Cys Lys Cys Gly
            180                 185                 190
Thr Leu Gln Gln Ile Val Leu Thr Gly Ile Leu Glu Gln Val Val Asn
```

```
        195                  200                  205
Cys Arg Asp Ala Leu Ala Gln Glu Tyr Leu Met Glu Cys Ile Ile Gln
    210                  215                  220
Val Phe Pro Asp Glu Phe His Leu Gln Thr Leu Asn Pro Phe Leu Arg
225                  230                  235                  240
Ala Cys Ala Glu Leu His Gln Asn Val Asn Val Lys Asn Ile Ile Ile
                245                  250                  255
Ala Leu Ile Asp Arg Leu Ala Leu Phe Ala His Arg Glu Asp Gly Pro
            260                  265                  270
Gly Ile Pro Ala Asp Ile Lys Leu Phe Asp Ile Phe Ser Gln Gln Val
        275                  280                  285
Ala Thr Val Ile Gln Ser Arg Gln Asp Met Pro Ser Glu Asp Val Val
    290                  295                  300
Ser Leu Gln Val Ser Leu Ile Asn Leu Ala Met Lys Cys Tyr Pro Asp
305                  310                  315                  320
Arg Val Asp Tyr Val Asp Lys Val Leu Glu Thr Thr Val Glu Ile Phe
                325                  330                  335
Asn Lys Leu Asn Leu Glu His Ile Ala Thr Ser Ser Ala Val Ser Lys
            340                  345                  350
Glu Leu Thr Arg Leu Leu Lys Ile Pro Val Asp Thr Tyr Asn Asn Ile
        355                  360                  365
Leu Thr Val Leu Lys Leu Lys His Phe His Pro Leu Phe Glu Tyr Phe
    370                  375                  380
Asp Tyr Glu Ser Arg Lys Ser Met Ser Cys Tyr Val Leu Ser Asn Val
385                  390                  395                  400
Leu Asp Tyr Asn Thr Glu Ile Val Ser Gln Asp Gln Val Asp Ser Ile
                405                  410                  415
Met Asn Leu Val Ser Thr Leu Ile Gln Asp Gln Pro Asp Gln Pro Val
            420                  425                  430
Glu Asp Pro Asp Pro Glu Asp Phe Ala Asp Glu Gln Ser Leu Val Gly
        435                  440                  445
Arg Phe Ile His Leu Leu Arg Ser Glu Asp Pro Asp Gln Gln Tyr Leu
    450                  455                  460
Ile Leu Asn Thr Ala Arg Lys His Phe Gly Ala Gly Gly Asn Gln Arg
465                  470                  475                  480
Ile Arg Phe Thr Leu Pro Pro Leu Val Phe Ala Ala Tyr Gln Leu Ala
                485                  490                  495
Phe Arg Tyr Lys Glu Asn Ser Lys Trp Met Thr Asn Gly Lys Arg Asn
            500                  505                  510
Ala Arg Arg Phe Phe His Leu Pro Xaa Gln Thr Ile Ser Ala Leu Ile
        515                  520                  525
Lys Ala Glu Leu Ala Glu Leu Pro Leu Arg Leu Phe Leu Gln Gly Ala
    530                  535                  540
Leu Ala Ala Gly Glu Ile Gly Phe Glu Asn His Glu Thr Val Ala Tyr
545                  550                  555                  560
Glu Phe Met Ser Gln Ala Phe Ser Leu Tyr Glu Asp Glu Ile Ser Asp
                565                  570                  575
Ser Lys Ala Gln Leu Ala Ala Ile Thr Leu Ile Ile Gly Thr Phe Glu
        580                  585                  590
Arg Met Lys Cys Phe Ser Glu Glu Asn His Glu Pro Leu Arg Thr Gln
    595                  600                  605
Cys Ala Leu Ala Ala Ser Lys Leu Leu Lys Lys Pro Asp Gln Gly Arg
    610                  615                  620
Ala Glu His Leu Cys Thr Ser Leu Trp Ser Gly Arg Asn Thr Asp Lys
```

```
625                   630                   635                   640
Asn Gly Glu Glu Leu His Gly Gly Lys Arg Val Met Glu Cys Leu Lys
                  645                   650                   655
Lys Ala Leu Lys Ile Ala Asn Gln Cys Met Asp Pro Ser Leu Gln Val
                  660                   665                   670
Gln Leu Phe Ile Glu Ile Leu Asn Arg Tyr Ile Tyr Phe Tyr Glu Lys
              675                   680                   685
Glu Asn Asp Ala Val Thr Ile Gln Val Leu Asn Gln Leu Ile Gln Lys
          690                   695                   700
Ile Arg Glu Asp Leu Pro Asn Leu Glu Ser Ser Glu Glu Thr Glu Gln
705                   710                   715                   720
Ile Asn Lys His Phe His Asn Thr Leu Glu His Leu Arg Leu Arg Arg
                  725                   730                   735
Glu Ser Pro Glu Ser Glu Gly Pro Ile Tyr Glu Gly Leu Ile Leu
                  740                   745                   750
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<210> 6181
<211> 1135
<212> DNA
<213> Homo sapiens

<400> 6181
gccaagcgct actcctggtc cggcatgggc cgcatccaca agggcatccg cgagcagggc
60
cggtacctca acagccggcc ctccatccag aagcccgagg tcttcttcct gcccgacctg
120
cccaccacgc cctatttctc ccgggacgca cagaaacatg atgtggaagt gctggaacgg
180
aacttccaga ccatcctgtg tgagtttgag accctctaca aagcttctc aaactgcagc
240
ctcccgcaag gatggaaaat gaacagcacc cccagcgggg agtggttcac cttttacttg
300
gtcaatcagg gggtttgtgt tcccaggaac tgtaggaagt gcccacggac gtaccgcttg
360
ctcggaagcc ttcggacctg tattgggaac aatgtttttg ggaacgcgtg catctctgtg
420
ctgagccctg ggactgtgat aacggagcac tatggaccca ccaacatccg catccgatgc
480
catttaggtc tgaaaactcc aaatggctgt gagctggtgg tgggggagga gccccagtgc
540
tgggcagaag ggcgctgcct tctctttgat gactctttcc tgcatgctgc gttccatgaa
600
ggttcagcag aggatggccc acgggtggtt ttcatggtgg atttggtggca tccaaacgtc
660
gcagcggccg aacggcaggc tcttgatttc atctttgtc cgggacgatg agagtatttc
720
ccatgctgga gtcggcgaga agggccgagg cggggcctgg gcagactgtg gtccggtcca
780
gtccctaccg gtgttgtttc catgctcaga aacctgcctc agcggaaagc tcttatttgg
840
gatttatat catgtcgggt ccctcttcc cttggttatt gtaaatggaa acttttcggc
900
ttgtatttcc ttagattttt tttttttcct tccaatcatt tgcttcagag actcctttct
960
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ggcctaacag cgcattcctt tgattggtcc ttgagtgacc agagacttag tgcccttgta
1020
agtctgtctt ctgttgctac ttgttttttt cagtgctctg aaatagagta actaaatggt
1080
tatttgtctg aatataataa tgtaaaactt cttgtggtca tcttaaaaaa aaaaa
1135

<210> 6182
<211> 236
<212> PRT
<213> Homo sapiens

<400> 6182
Ala Lys Arg Tyr Ser Trp Ser Gly Met Gly Arg Ile His Lys Gly Ile
1   5   10   15
Arg Glu Gln Gly Arg Tyr Leu Asn Ser Arg Pro Ser Ile Gln Lys Pro
            20   25   30
Glu Val Phe Phe Leu Pro Asp Leu Pro Thr Thr Pro Tyr Phe Ser Arg
        35   40   45
Asp Ala Gln Lys His Asp Val Glu Val Leu Glu Arg Asn Phe Gln Thr
    50   55   60
Ile Leu Cys Glu Phe Glu Thr Leu Tyr Lys Ala Phe Ser Asn Cys Ser
65   70   75   80
Leu Pro Gln Gly Trp Lys Met Asn Ser Thr Pro Ser Gly Glu Trp Phe
                85   90   95
Thr Phe Tyr Leu Val Asn Gln Gly Val Cys Val Pro Arg Asn Cys Arg
                100   105   110
Lys Cys Pro Arg Thr Tyr Arg Leu Leu Gly Ser Leu Arg Thr Cys Ile
            115   120   125
Gly Asn Asn Val Phe Gly Asn Ala Cys Ile Ser Val Leu Ser Pro Gly
        130   135   140
Thr Val Ile Thr Glu His Tyr Gly Pro Thr Asn Ile Arg Ile Arg Cys
145   150   155   160
His Leu Gly Leu Lys Thr Pro Asn Gly Cys Glu Leu Val Val Gly Gly
                165   170   175
Glu Pro Gln Cys Trp Ala Glu Gly Arg Cys Leu Leu Phe Asp Asp Ser
            180   185   190
Phe Leu His Ala Ala Phe His Glu Gly Ser Ala Glu Asp Gly Pro Arg
        195   200   205
Val Val Phe Met Val Asp Leu Trp His Pro Asn Val Ala Ala Ala Glu
    210   215   220
Arg Gln Ala Leu Asp Phe Ile Phe Ala Pro Gly Arg
225   230   235

<210> 6183
<211> 2530
<212> DNA
<213> Homo sapiens

<400> 6183
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gaggattagc atctgccatt gactcgcatt aaagggccca gcgtctcgcg tgagaggttg
120

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aggttgtgtt gcggggggtcg ggtagctgta ggtcttagaa atggcatcaa aggtggcctt
180
ggcgaagttg cccagggtgg cagtgcagcc ccgggctgag gtgtagcagt catcgatacc
240
agccatcatg agcagcttct taggcacagg tgcggagacg atgccagtgc ccctgggtgc
300
agggatgagg cgtaccagca cagagccgca gcggcctgtc acctggtgag ggaaggagtc
360
aggagacggg ggccgagggg agcctgcccc acggcaggcc catcacctgc caccagccta
420
ccttgcaagg gacagtgtgg ggcttggcga tcttgttccc ccagtagcct ctgcgcacgg
480
ggacgatgga gagcttggcc aggatgatgg ccccacggat ggcggtggcc acctccttgg
540
agcacttaac acccagaccg acgtggccat tgtagtcccc gatagcaaca aatgccttga
600
acctggtgcg ctggccggca cgggtctgct tctgcactgg cataatcttc aaaacctcat
660
ccttgagaga ggcccccagg aaaaagtcaa tgatctctga ttccttaatg ggcagagaga
720
agagatagat ctcctccagg gacttgatct tcatgtcctt gaccaagcgg cccaacttgg
780
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840
ggcccgtcc acggccgcga ccccggccct ggtggccctg ggatgggaa ccgcggtggc
900
ttccgcggag gtttcggcag tggcatccgg ggcgggggtc gcggccgtgg acggggccgg
960
ggccgaggcc gcggagctcc cggaggcaag gccgaggata aggagtggat gcccgtcacc
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1080
tccctgccca ttaaggaatc agagatcatt gatttcttcc tgggggcctc tctcaaggat
1140
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1200
aaggcatttg ttgctatcgg ggactacaat ggccacgtcg gtctgggtgt taagtgctcc
1260
aaggaggtgg ccaccgccat ccgtggggcc atcatcctgg ccaagctctc catcgtcccc
1320
gtgcgcagag gctactgggg gaacaagatc ggcaagcccc acactgtccc ttgcaaggtg
1380
acaggccgct gcggctctgt gctggtacgc ctcatccctg cacccagggg cactggcatc
1440
gtctccgcac ctgtgcctaa gaagctgctc atgatggctg gtatcgatga ctgctacacc
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1560
tctaagacct acagctacct gacccccgac ctctggaagg agactgtatt caccaagtct
1620
ccctatcagg agttcactga ccacctcgtc aagacccaca ccagagtctc cgtgcagcgg
1680
actcaggctc cagctgtggc tacaacatag ggttttata caagaaaaat aaagtgaatt
1740
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aagctgtcac cccaccatgg agaaaagagt cttttggttc tttttaacat aagtgattag
1800
tttaagagta tgctgaggag ccactgggct taaagaagga tgtaaataag acccaaatac
1860
atagggacca ggcgctgctt tctcatgttc acaaaagcag tcctccacca ctgaactcca
1920
ttctctcagg gggtcaatg aaggctaacc aatccgatgc atgtgtaggt aacagtccca
1980
tggactggtca cttgtaaaca gccaatgcca aacccatcag gttcccaatg agatagacca
2040
aaccctgaag aaacttctgg cttgaacttt ctaacatctt gaaagtggct gaaatggcca
2100
taagtgcctg aatgggtcgc caggccatca tacacaccat catagtaggg aagatggaga
2160
tagtattgcc tgccatgtac atgatgaaga gattcatggg aatctgtttg aggggaccca
2220
aggcgatgtc ccagcagcgc ttctccacca ggatccggtc tgtctcttgc acgctggtat
2280
caggcacttg cttgtccaag taaccgactg ggtagagcga gtctccctgg ccactgcccc
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2400
gccggcctcg gttagccacc aggcccccct gggccgtcat ggcaacagct gcgtcctata
2460
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2520
tgtctcaccc
2530
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<210> 6184
<211> 308
<212> PRT
<213> Homo sapiens
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<400> 6184
Arg Ala Ser Thr Pro Tyr Leu Arg Pro Cys Leu Arg Glu Leu Arg Gly
1               5                   10                  15
Leu Gly Pro Gly Pro Val His Gly Arg Asp Pro Gly Pro Gly Gly Pro
                20                  25                  30
Gly Met Gly Asn Arg Gly Gly Phe Arg Gly Gly Phe Gly Ser Gly Ile
            35                  40                  45
Arg Gly Arg Gly Arg Gly Arg Gly Arg Gly Arg Gly Arg Gly Arg Gly
    50                  55                  60
Ala Arg Gly Gly Lys Ala Glu Asp Lys Glu Trp Met Pro Val Thr Lys
65                  70                  75                  80
Leu Gly Arg Leu Val Lys Asp Met Lys Ile Lys Ser Leu Glu Glu Ile
                85                  90                  95
Tyr Leu Phe Ser Leu Pro Ile Lys Glu Ser Glu Ile Ile Asp Phe Phe
                100                 105                 110
Leu Gly Ala Ser Leu Lys Asp Glu Val Leu Lys Ile Met Pro Val Gln
            115                 120                 125
Lys Gln Thr Arg Ala Gly Gln Arg Thr Arg Phe Lys Ala Phe Val Ala
    130                 135                 140
Ile Gly Asp Tyr Asn Gly His Val Gly Leu Gly Val Lys Cys Ser Lys
```

```
145                    150                    155                    160
Glu Val Ala Thr Ala Ile Arg Gly Ala Ile Ile Leu Ala Lys Leu Ser
                   165                    170                    175
Ile Val Pro Val Arg Arg Gly Tyr Trp Gly Asn Lys Ile Gly Lys Pro
               180                    185                    190
His Thr Val Pro Cys Lys Val Thr Gly Arg Cys Gly Ser Val Leu Val
           195                    200                    205
Arg Leu Ile Pro Ala Pro Arg Gly Thr Gly Ile Val Ser Ala Pro Val
       210                    215                    220
Pro Lys Lys Leu Leu Met Met Ala Gly Ile Asp Asp Cys Tyr Thr Ser
225                    230                    235                    240
Ala Arg Gly Cys Thr Ala Thr Leu Gly Asn Phe Ala Lys Ala Thr Phe
                   245                    250                    255
Asp Ala Ile Ser Lys Thr Tyr Ser Tyr Leu Thr Pro Asp Leu Trp Lys
               260                    265                    270
Glu Thr Val Phe Thr Lys Ser Pro Tyr Gln Glu Phe Thr Asp His Leu
           275                    280                    285
Val Lys Thr His Thr Arg Val Ser Val Gln Arg Thr Gln Ala Pro Ala
       290                    295                    300
Val Ala Thr Thr
305


<210> 6185
<211> 1231
<212> DNA
<213> Homo sapiens

<400> 6185
cacagcttgt tcctaggaag ggcttagcaa acgggggtgg ttgtccttct tggaagccac
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atttgtttgc ctggtgagtg gtggagggca ctgctaggcc tgctagggct gacacggcca
120
gagtcagatg acctcatctc acatccagca ggtgaaatgc agtctttgat cccttgaaac
180
ccaccctcta ggaccaaggt cactgcagta ttggatagga cctcagggag ttagcagggg
240
gctcatggtt aagagtgtga actacagctt agacctacag ggttccctgc ccagctcctc
300
cacaaaccag ctgtgcaacc ctagacaagt gagttaatgt ccctgggcct cagtttcttc
360
ttagtaaaat gtgtgtagcc atagagggct gttatgagga ttcagtcaaa tgacacatga
420
tgtcttgggc acacctggcg tggattatgg cgcctgtagg agcaggaggg cttcctggag
480
gaggggggcta gttgaacaga gtctagaaag tatagattgg gaagagcact ctgggaggca
540
ggatcaccat gtgcaaaggc tcagagaatg ccacccacta cctcctggaa atcaagggga
600
ttctgtgtgt ccaagggcat tggtggtctc taggcccccg acctgtgtct gggaggtgtc
660
aagggggaagc cagatccgag gcccacactt gcatgttttc aggtgaggtc cagagatata
720
tccagagagg agtggaaggg ctcggagacc tacagcccca atactgcata tggtgtggac
780
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ttcctggtgc ccgtgatggg ctatatctgc cgcatctgcc acaagttcta tcacagcaac
840
tcaggggcac agctctccca ctgcaagtcc ctgggccact ttgagaacct gcagaaatac
900
aaggcggcca agaaccccag ccccaccacc cgacctgtga gccgccggtg cgcaatcaac
960
gcccggaacg ctttgacagc cctgttcacc tccagcggcc gcccaccctc ccagcccaac
1020
acccaggaca aaacacccag caaggtgacg gctcgaccct cccagccccc actacctcgg
1080
cgctcaaccc gcctcaaaac ctgatagagg gacctccctg tccctggcct gcctgggtcc
1140
agatctgcta atgctttta ggagtctgcc tggaaacttt gacatggttc atgttttac
1200
tcaaaatcca ataaaacaag gtaagtttgg c
1231


<210> 6186
<211> 133
<212> PRT
<213> Homo sapiens


<400> 6186
Val Arg Ser Arg Asp Ile Ser Arg Glu Glu Trp Lys Gly Ser Glu Thr
1               5                   10                  15
Tyr Ser Pro Asn Thr Ala Tyr Gly Val Asp Phe Leu Val Pro Val Met
            20                  25                  30
Gly Tyr Ile Cys Arg Ile Cys His Lys Phe Tyr His Ser Asn Ser Gly
        35                  40                  45
Ala Gln Leu Ser His Cys Lys Ser Leu Gly His Phe Glu Asn Leu Gln
    50                  55                  60
Lys Tyr Lys Ala Ala Lys Asn Pro Ser Pro Thr Thr Arg Pro Val Ser
65                  70                  75                  80
Arg Arg Cys Ala Ile Asn Ala Arg Asn Ala Leu Thr Ala Leu Phe Thr
                85                  90                  95
Ser Ser Gly Arg Pro Pro Ser Gln Pro Asn Thr Gln Asp Lys Thr Pro
            100                 105                 110
Ser Lys Val Thr Ala Arg Pro Ser Gln Pro Pro Leu Pro Arg Arg Ser
        115                 120                 125
Thr Arg Leu Lys Thr
    130


<210> 6187
<211> 909
<212> DNA
<213> Homo sapiens


<400> 6187
nagtcctccc aaagtacttg tgtccgggtg gtggactgga ttcgctgcgg agccctggaa
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gctgcctttc cttctccctg tgcttaacca gaggtgccca tgggttggac aatgaggctg
120
gtcacagcag cactgttact gggtctcatg atggtggtca ctggagacga ggatgagaac
180
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agcccgtgtg cccatgaggc cctcttggac gaggacaccc tcttttgcca gggccttgaa
240
gttttctacc cagagttggg gaacattggc tgcaaggttg ttcctgattg taacaactac
300
agacagaaga tcacctcctg gatggagccg atagtcaagt tcccgggggc cgtgtacggc
360
gcaacctata tcctggtgat ggtggatcca gatgccccta gcagagcaga acccagacag
420
agattctgga gacattggct ggtaacagat atcaagggcg ccgacctgaa gaaagggaag
480
attcagggc aggagttatc agcctaccag gctccctccc caccggcaca cagtggcttc
540
catcgctacc agttcttttgt ctatcttcag gaaggaaaag tcatctctct ccttcccaag
600
gaaaacaaaa ctcgaggctc ttggaaaatg gacagatttc tgaaccgttt ccacctgggc
660
gaacctgaag caagcaccca gttcatgacc cagaactacc aggactcacc aaccctccag
720
gctcccagag aaagggccag cgagcccaag cacaaaaacc aggcggagat agctgcctgc
780
tagatagccg gctttgccat ccgggcatgt ggccacactg cccaccaccg acgatgtggg
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<210> 6188
<211> 227
<212> PRT
<213> Homo sapiens

<400> 6188
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1               5                   10                  15
Met Met Val Val Thr Gly Asp Glu Asp Glu Asn Ser Pro Cys Ala His
            20                  25                  30
Glu Ala Leu Leu Asp Glu Asp Thr Leu Phe Cys Gln Gly Leu Glu Val
        35                  40                  45
Phe Tyr Pro Glu Leu Gly Asn Ile Gly Cys Lys Val Val Pro Asp Cys
    50                  55                  60
Asn Asn Tyr Arg Gln Lys Ile Thr Ser Trp Met Glu Pro Ile Val Lys
65                  70                  75                  80
Phe Pro Gly Ala Val Tyr Gly Ala Thr Tyr Ile Leu Val Met Val Asp
                85                  90                  95
Pro Asp Ala Pro Ser Arg Ala Glu Pro Arg Gln Arg Phe Trp Arg His
            100                 105                 110
Trp Leu Val Thr Asp Ile Lys Gly Ala Asp Leu Lys Lys Gly Lys Ile
        115                 120                 125
Gln Gly Gln Glu Leu Ser Ala Tyr Gln Ala Pro Ser Pro Pro Ala His
        130                 135                 140
Ser Gly Phe His Arg Tyr Gln Phe Phe Val Tyr Leu Gln Glu Gly Lys
145                 150                 155                 160
Val Ile Ser Leu Leu Pro Lys Glu Asn Lys Thr Arg Gly Ser Trp Lys
```

```
                  165                    170                    175
Met Asp Arg Phe Leu Asn Arg Phe His Leu Gly Glu Pro Glu Ala Ser
              180                    185                    190
Thr Gln Phe Met Thr Gln Asn Tyr Gln Asp Ser Pro Thr Leu Gln Ala
          195                    200                    205
Pro Arg Glu Arg Ala Ser Glu Pro Lys His Lys Asn Gln Ala Glu Ile
      210                    215                    220
Ala Ala Cys
225
```

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<210> 6189
<211> 2761
<212> DNA
<213> Homo sapiens
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120
tgaggcaagc ccccaggctc cgctcttgcc agagggacag gagccatggc tcagaaaatg
180
gactgtggtg cgggcctcct cggcttccag gctgaggcct ccgtagaaga cagcgccttg
240
cttatgcaga ccttgatgga ggccatccag atctcagagg ctccacctac taaccaggcc
300
accgcagctg ctagtcccca gagttcacag cccccaactg ccaatgagat ggctgacatt
360
caggtttcag cagctgccgc taggcctaag tcagcctta aagtccagaa tgccaccaca
420
aaaggcccaa atggtgtcta tgatttctct caggctcata atgccaagga tgtgcccaac
480
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540
tatgatttt cccaggcagc aaccactggt gagttagctg ctaacaagtc tgagatggcc
600
ttcaaggccc agaatgccac tactaaagtg ggcccaaatg ccacctacaa tttctctcag
660
tctctcaatg ccaatgacct ggcaacagc aggcctaaga cccctttcaa ggcttggaat
720
gataccacta aggccccaac agctgatacc cagacccaga atgtaaatca ggccaaaatg
780
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840
gcacagacat cagcagatgg ttcccaggct cagaatctgg agtcccggac aataattcgg
900
ggcaagagga cccgcaagat taataacttg aatgttgaag agaacagcag tggggatcag
960
aggcggggccc cactggctgc agggacctgg aggtctgcac cagttccagt gaccactcag
1020
aacccacctg cgcgcacccc caatgtgctc tggcagacgc cattggcttg gcagaacccc
1080
tcaggctggc aaaaccagac agccaggcag accccaccag cacgtcagag ccctccagct
1140
```

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aggcagaccc caccagcctg gcagacccag aacccagtcg cttggcagaa cccagtgatt
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tggccaaacc cagtaatctg gcagaaccca gtgatctggc caaaccccat tgtctggccc
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1320
cctgatggc agaccccacc gggctggcag ggtcctccag actggcaagg tcctcctgac
1380
tggccgctac cacccgactg gccactgcca cctgattggc cacttcccac tgactggcca
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1980
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2160
gcacagttca tggaggctgc agatgaggcc ttggatgctc tggatgctgc tgcagctgag
2220
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2280
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tccagattcc ctcagacctt tgccggtccc attattggtc ctggtggtac agccagtgcc
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2580
cacactatc tagagagcca catcctgttg actgaaagtg gcatgcaaga taaatttatt
2640
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2760
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a
2761

<210> 6190
<211> 576
<212> PRT
<213> Homo sapiens

<400> 6190

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Pro Asp Gly Ala Thr Ala Gln Thr Ser Ala Asp Gly Ser Gln Ala Gln
            20                  25                  30
Asn Leu Glu Ser Arg Thr Ile Ile Arg Gly Lys Arg Thr Arg Lys Ile
        35                  40                  45
Asn Asn Leu Asn Val Glu Glu Asn Ser Ser Gly Asp Gln Arg Arg Ala
    50                  55                  60
Pro Leu Ala Ala Gly Thr Trp Arg Ser Ala Pro Val Pro Val Thr Thr
65                  70                  75                  80
Gln Asn Pro Pro Gly Ala Pro Pro Asn Val Leu Trp Gln Thr Pro Leu
                85                  90                  95
Ala Trp Gln Asn Pro Ser Gly Trp Gln Asn Gln Thr Ala Arg Gln Thr
            100                 105                 110
Pro Pro Ala Arg Gln Ser Pro Pro Ala Arg Gln Thr Pro Pro Ala Trp
        115                 120                 125
Gln Thr Gln Asn Pro Val Ala Trp Gln Asn Pro Val Ile Trp Pro Asn
    130                 135                 140
Pro Val Ile Trp Gln Asn Pro Val Ile Trp Pro Asn Pro Ile Val Trp
145                 150                 155                 160
Pro Gly Pro Val Val Trp Pro Asn Pro Leu Ala Trp Gln Asn Pro Pro
                165                 170                 175
Gly Trp Gln Thr Pro Pro Gly Trp Gln Thr Pro Pro Gly Trp Gln Gly
            180                 185                 190
Pro Pro Asp Trp Gln Gly Pro Pro Asp Trp Pro Leu Pro Pro Asp Trp
        195                 200                 205
Pro Leu Pro Pro Asp Trp Pro Leu Pro Pro Asp Trp Pro Leu Pro Pro
        210                 215                 220
Asp Trp Ile Pro Ala Asp Trp Pro Ile Pro Pro Asp Trp Gln Asn Leu
225                 230                 235                 240
Arg Pro Ser Pro Asn Leu Arg Pro Ser Pro Asn Ser Arg Ala Ser Gln
                245                 250                 255
Asn Pro Gly Ala Ala Gln Pro Arg Asp Val Ala Leu Leu Gln Glu Arg
            260                 265                 270
Ala Asn Lys Leu Val Lys Tyr Leu Met Leu Lys Asp Tyr Thr Lys Val
        275                 280                 285
Pro Ile Lys Arg Ser Glu Met Leu Arg Asp Ile Ile Arg Glu Tyr Thr
    290                 295                 300
Asp Val Tyr Pro Glu Ile Ile Glu Arg Ala Cys Phe Val Leu Glu Lys
305                 310                 315                 320
Lys Phe Gly Ile Gln Leu Lys Glu Ile Asp Lys Glu Glu His Leu Tyr
                325                 330                 335
Ile Leu Ile Ser Thr Pro Glu Ser Leu Ala Gly Ile Leu Gly Thr Thr
            340                 345                 350
Lys Asp Thr Pro Lys Leu Gly Leu Leu Leu Val Ile Leu Gly Val Ile
```

```
           355                 360                 365
Phe Met Asn Gly Asn Arg Ala Ser Glu Ala Val Leu Trp Glu Ala Leu
    370                 375                 380
Arg Lys Met Gly Leu Arg Pro Gly Val Arg His Pro Leu Leu Gly Asp
385                 390                 395                 400
Leu Arg Lys Leu Leu Thr Tyr Glu Phe Val Lys Gln Lys Tyr Leu Asp
                405                 410                 415
Tyr Arg Arg Val Pro Asn Ser Asn Pro Pro Glu Tyr Glu Phe Leu Trp
                420                 425                 430
Gly Leu Arg Ser Tyr His Glu Thr Ser Lys Met Lys Val Leu Arg Phe
        435                 440                 445
Ile Ala Glu Val Gln Lys Arg Asp Pro Arg Asp Trp Thr Ala Gln Phe
    450                 455                 460
Met Glu Ala Ala Asp Glu Ala Leu Asp Ala Leu Asp Ala Ala Ala Ala
465                 470                 475                 480
Glu Ala Glu Ala Arg Ala Glu Ala Arg Thr Arg Met Gly Ile Gly Asp
                485                 490                 495
Glu Ala Val Ser Gly Pro Trp Ser Trp Asp Asp Ile Glu Phe Glu Leu
                500                 505                 510
Leu Thr Trp Asp Glu Gly Asp Phe Gly Asp Pro Trp Ser Arg Ile
        515                 520                 525
Pro Phe Thr Phe Trp Ala Arg Tyr His Gln Asn Ala Arg Ser Arg Phe
    530                 535                 540
Pro Gln Thr Phe Ala Gly Pro Ile Ile Gly Pro Gly Gly Thr Ala Ser
545                 550                 555                 560
Ala Asn Phe Ala Ala Asn Phe Gly Ala Ile Gly Phe Phe Trp Val Glu
                565                 570                 575


<210> 6191
<211> 3021
<212> DNA
<213> Homo sapiens

<400> 6191
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120
gtacttcaag aaggtgcctc tgtttacttt ggttttgcac tgccatgcga ccaggtggtg
180
caggtctccc aaatgccacc cccctccaag cttccctctt tgctctaagt cctcaggcct
240
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300
gcactcaccg cagcctaagc tgggatccca gctcagaggt caggccatgt tgggatgttt
360
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420
attgatctgg agaacattgt gtactacaag gacgacaccc actactttgt gatgacagcc
480
aagaagcagt gcctgctgcg gctggggggtg ctgcgccagg actggcagga caccaatcgg
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ctgctgggca gtgccaatgt ggtgaccgag gctctgcagc gctttacccg ggcagctgct
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1920
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1980
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2100
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ccagtccaga gcccctcaagc tcttgtggcc atgggagaagg aggaaaaaga gagtcccttc
2220
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tccagtgaag aggaagaaga agatgtgcct ttggactcag atgtggaaca ggccctgcag
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cgccgtgcga aggaggagga gatgaagagg ttctgcaagg cccagaccat ccaacggcga
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2700
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3021


<210> 6192
<211> 815
<212> PRT
<213> Homo sapiens

<400> 6192
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1               5                   10                  15
Cys Pro Val Pro Pro Gly Ile Asp Leu Glu Asn Ile Val Tyr Tyr Lys
            20                  25                  30
Asp Asp His Tyr Phe Val Met Thr Ala Lys Lys Cys Leu Leu
        35                  40                  45
Arg Leu Gly Val Leu Arg Gln Asp Trp Pro Asp Thr Asn Arg Leu Leu
    50                  55                  60
Gly Ser Ala Asn Val Val Thr Glu Ala Leu Gln Arg Phe Thr Arg Ala
65                  70                  75                  80
Ala Ala Asp Phe Ala Thr His Gly Lys Leu Gly Lys Leu Glu Phe Ala
                85                  90                  95
Gln Asp Ala His Gly Gln Pro Asp Val Ser Ala Phe Asp Phe Thr Ser
            100                 105                 110
Met Met Arg Ala Glu Ser Ser Ala Arg Val Gln Glu Lys His Gly Ala
        115                 120                 125
Arg Leu Leu Leu Gly Leu Val Gly Asp Cys Leu Val Glu Pro Phe Trp
    130                 135                 140
Pro Leu Gly Thr Gly Val Ala Arg Gly Phe Leu Ala Ala Phe Asp Ala
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145                     150                     155                     160
Ala Trp Met Val Lys Arg Trp Ala Glu Gly Ala Glu Ser Leu Glu Val
                165                     170                     175
Leu Ala Glu Arg Glu Ser Leu Tyr Gln Leu Leu Ser Gln Thr Ser Pro
            180                     185                     190
Glu Asn Met His Arg Asn Val Ala Gln Tyr Gly Leu Asp Pro Ala Thr
        195                     200                     205
Arg Tyr Pro Asn Leu Asn Leu Arg Ala Val Thr Pro Asn Gln Val Arg
    210                     215                     220
Asp Leu Tyr Asp Val Leu Ala Lys Glu Pro Val Gln Arg Asn Asn Asp
225                     230                     235                     240
Lys Thr Asp Thr Gly Met Pro Ala Thr Gly Ser Ala Gly Thr Gln Glu
                245                     250                     255
Glu Leu Leu Arg Trp Cys Gln Glu Gln Thr Ala Gly Tyr Pro Gly Val
            260                     265                     270
His Val Ser Asp Leu Ser Ser Ser Trp Ala Asp Gly Leu Ala Leu Cys
        275                     280                     285
Ala Leu Val Tyr Arg Leu Gln Pro Gly Leu Leu Glu Pro Ser Glu Leu
    290                     295                     300
Gln Gly Leu Gly Ala Leu Glu Ala Thr Ala Trp Ala Leu Lys Val Ala
305                     310                     315                     320
Glu Asn Glu Leu Gly Ile Thr Pro Val Val Ser Ala Gln Ala Val Val
                325                     330                     335
Ala Gly Ser Asp Pro Leu Gly Leu Ile Ala Tyr Leu Ser His Phe His
            340                     345                     350
Ser Ala Phe Lys Ser Met Ala His Ser Pro Gly Pro Val Ser Gln Ala
        355                     360                     365
Ser Pro Gly Thr Ser Ser Ala Val Leu Phe Leu Ser Lys Leu Gln Arg
    370                     375                     380
Thr Leu Gln Arg Ser Arg Ala Lys Asp Leu Leu Gln Glu Asn Ala Glu
385                     390                     395                     400
Asp Ala Gly Gly Lys Lys Leu Arg Leu Glu Met Glu Ala Glu Thr Pro
                405                     410                     415
Ser Thr Glu Val Pro Pro Asp Pro Glu Pro Gly Val Pro Leu Thr Pro
            420                     425                     430
Pro Ser Gln His Gln Glu Ala Gly Ala Gly Asp Leu Cys Ala Leu Cys
        435                     440                     445
Gly Gln His Leu Tyr Val Leu Glu Arg Leu Cys Val Asn Gly His Phe
    450                     455                     460
Phe His Arg Ser Cys Phe Arg Cys His Thr Cys Glu Ala Thr Leu Trp
465                     470                     475                     480
Pro Gly Gly Tyr Glu Gln His Pro Gly Asp Gly His Phe Tyr Cys Leu
                485                     490                     495
Gln His Leu Pro Gln Thr Asp His Lys Ala Glu Gly Ser Asp Arg Gly
            500                     505                     510
Pro Glu Ser Pro Glu Leu Pro Thr Pro Ser Glu Asn Ser Met Pro Pro
        515                     520                     525
Gly Leu Ser Thr Pro Thr Ala Ser Gln Glu Gly Ala Gly Pro Val Pro
    530                     535                     540
Asp Pro Ser Gln Pro Thr Arg Arg Gln Ile Arg Leu Ser Ser Pro Glu
545                     550                     555                     560
Arg Gln Arg Leu Ser Ser Leu Asn Leu Thr Pro Asp Pro Glu Met Glu
                565                     570                     575
Pro Pro Pro Lys Pro Pro Arg Ser Cys Ser Ala Leu Ala Arg His Ala
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              580                 585                 590
Leu Glu Ser Ser Phe Val Gly Trp Gly Leu Pro Val Gln Ser Pro Gln
          595                 600                 605
Ala Leu Val Ala Met Glu Lys Glu Glu Lys Glu Ser Pro Phe Ser Ser
      610                 615                 620
Glu Glu Glu Glu Glu Asp Val Pro Leu Asp Ser Asp Val Glu Gln Ala
625                 630                 635                 640
Leu Gln Thr Phe Ala Lys Thr Ser Gly Thr Met Asn Asn Tyr Arg Thr
                  645                 650                 655
Trp Arg Arg Thr Leu Leu Arg Arg Ala Lys Glu Glu Glu Met Lys Arg
              660                 665                 670
Phe Cys Lys Ala Gln Thr Ile Gln Arg Arg Leu Asn Gln Ile Glu Ala
      690                 695                 700
Ala Leu Arg Glu Leu Glu Ala Glu Gly Val Lys Leu Glu Leu Ala Leu
Arg Arg Gln Ser Ser Ser Pro Glu Gln Gln Lys Lys Leu Trp Val Gly
705                 710                 715                 720
Gln Leu Leu Gln Leu Val Asp Lys Lys Asn Ser Leu Val Ala Glu Glu
                  725                 730                 735
Ala Glu Leu Met Ile Thr Val Gln Gly Leu Asn Leu Glu Glu Lys Gln
              740                 745                 750
Trp Gln Leu Asp Gln Glu Leu Arg Gly Tyr Met Asn Arg Glu Glu Asn
          755                 760                 765
Leu Lys Ser Thr Ala Ala Asp Arg Gln Ala Glu Asp Gln Val Leu Arg Lys
      770                 775                 780
Leu Val Asp Leu Val Asn Gln Arg Asp Ala Leu Ile Arg Phe Gln Glu
785                 790                 795                 800
Glu Arg Arg Leu Ser Glu Leu Ala Leu Gly Thr Gly Ala Gln Gly
                  805                 810                 815
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<210> 6193
<211> 2893
<212> DNA
<213> Homo sapiens

<400> 6193
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cattcatttt tttagaaacat ccttcaaaga gttcatgcat cttactgagg acacctgacc   180
ttttgaagct tcataattca catctagatg tcaccggtct ttcccatgtt aacagttctg   240
accatgtttt attatatatg ccttcggcgc cgagccagga cagctacaag aggagaaatg   300
atgacacccc atagagctat agaatcaaac agccagactt ccctctcaa tgcagaggta   360
gtccagtatg ccaaagaagt agtggatttc agttcccatt atggaagtga gaatagtatg   420
tcctatacta tgtgtgaattt ggctggtgta ccaaatgtat tcccaagttc tggtgacttt   480
actcagacag ctgtgtttcg aacttatggg acatggtggg atcagtgtcc tagtgcttcc   540
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ttgccattca agaggacgcc acctaatttt cagagccagg actatgtgga acttactttt
600

gaacaacagg tgtatcctac agctgtacat gttctagaaa cctatcatcc cggagcagtc
660

attagaattc tcgcttgttc tgcaaatcct tattccccaa atccaccagc tgaagtaaga
720

tgggagattc tttggtcaga gagacctacg aaggtgaatg cttcccaagc tcgccagttt
780

aaaccttgta ttaagcagat aaatttcccc acaaatctta tacgactgga agtaaatagt
840

tctcttctgg aatattacac tgaattagat gcagttgtgc tacatggtgt gaaggacaag
900

ccagtgcttt ctctcaagac ttcacttatt gacatgaatg atatagaaga tgatgcctat
960

gcagaaaagg atggttgtgg aatggacagt cttaacaaaa agtttagcag tgctgtcctc
1020

ggggaagggc caaataatgg gtattttgat aaactacctt atgagcttat tcagctgatt
1080

ctgaatcatc ttacactacc agacctgtgt agattagcac agacttgcaa actactgagc
1140

cagcattgct gtgatcctct gcaatacatc cacctcaatc tgcaaccata ctgggcaaaa
1200

ctagatgaca cttctctgga atttctacag tctcgctgca ctcttgtcca gtggcttaat
1260

ttatcttgga ctggcaatag aggcttcatc tctgttgcag gatttagcag gtttctgaag
1320

gtttgtggat ccgaattagt acgccttgaa ttgtcttgca gccactttct taatgaaact
1380

tgcttagaag ttatttctga gatgtgtcca aatctacagg ccttaaatct ctcctcctgt
1440

gataagctac cacctcaagc tttcaaccac attgccaagt tatgcagcct taaacgactt
1500

gttctctatc gaacaaaagt agagcaaaca gcactgctca gcattttgaa cttctgttca
1560

gagcttcagc acctcagttt aggcagttgt gtcatgattg aagactatga tgtgatagct
1620

agcatgatag gagccaagtg taaaaaactc cggaccctgg atctgtggag atgtaagaat
1680

attactgaga atggaatagc agaactggct tctgggtgtc cactactgga ggagcttgac
1740

cttggctggt gcccaactct gcagagcagc accgggtgct tcaccagact ggcacaccag
1800

ctcccaaact tgcaaaaact ctttcttaca gctaatagat ctgtgtgtga cacagacatt
1860

gatgaattgg catgtaattg taccaggtta cagcagctgg acatattagg aacaagaatg
1920

gtaagtccgg catccttaag aaaactcctg gaatcttgta aagatctttc tttacttgat
1980

gtgtcctct gttcgcagat tgataacaga gctgtgctag aactgaatgc aagctttcca
2040

aaagtgttca taaaaaagag ctttactcag tgacttaata tatgttctgt attaaaatta
2100

atgtgctttg ttggggttta attttgggat tggttttggg ttttgttttt agttgtttta
2160

```
atggtaagaa ttaagacatt tgtagatttt aaagaaaaat atgaaattgt ccattaaatc
2220
aagtaaaaat gtgcacaaat gttttcataa aatactgcaa gcacttctct tcaagaatat
2280
gagtggatat tattttttacc ttatgttaat cagtgatatg ctttagtcaa taatatgatt
2340
gataaaagaa taacatggaa tcatgctaac ttattttcaa aggaacactg agcaataaag
2400
tatcgtggca tttatgcaaa aaaaaaagtt aattttttac accttcatgt aaggatgtct
2460
tattaagcct gtgacctggc aagtgttttg tttggtatgt acaaaatggt cagagctagt
2520
tggagaatga gacatgcttt tccagctgtt tggttatttc tctggattaa ctgttcaact
2580
ggaaaatttt tagttttttct agccaggtgt ggtggcacac acttgtagtc ctagcgacac
2640
gggaggtgga ggcaggagga ttacttgaga tgggattttg agactctagt gtacttatga
2700
ttgcacctgt gagcagccac tgcactccaa cctgggcaat atagcgagtc cctttctctt
2760
aaaaaaaatt gtagtgtttc cacttttctt ctgatatttt tgtctatttc actactggat
2820
aatgccaata taaaaatttg ggtataatca agaataagag gtaaactact aaataaaaaa
2880
agctttccaa ctg
2893


<210> 6194
<211> 621
<212> PRT
<213> Homo sapiens

<400> 6194
Met Ser Pro Val Phe Pro Met Leu Thr Val Leu Thr Met Phe Tyr Tyr
1               5                   10                  15
Ile Cys Leu Arg Arg Arg Ala Arg Thr Ala Thr Arg Gly Glu Met Met
            20                  25                  30
Asn Thr His Arg Ala Ile Glu Ser Asn Ser Gln Thr Ser Pro Leu Asn
        35                  40                  45
Ala Glu Val Val Gln Tyr Ala Lys Glu Val Val Asp Phe Ser Ser His
    50                  55                  60
Tyr Gly Ser Glu Asn Ser Met Ser Tyr Thr Met Trp Asn Leu Ala Gly
65                  70                  75                  80
Val Pro Asn Val Phe Pro Ser Ser Gly Asp Phe Thr Gln Thr Ala Val
                85                  90                  95
Phe Arg Thr Tyr Gly Thr Trp Trp Asp Gln Cys Pro Ser Ala Ser Leu
                100                 105                 110
Pro Phe Lys Arg Thr Pro Pro Asn Phe Gln Ser Gln Asp Tyr Val Glu
            115                 120                 125
Leu Thr Phe Glu Gln Gln Val Tyr Pro Thr Ala Val His Val Leu Glu
        130                 135                 140
Thr Tyr His Pro Gly Ala Val Ile Arg Ile Leu Ala Cys Ser Ala Asn
145                 150                 155                 160
Pro Tyr Ser Pro Asn Pro Pro Ala Glu Val Arg Trp Glu Ile Leu Trp
```

```
                  165                    170                    175
Ser Glu Arg Pro Thr Lys Val Asn Ala Ser Gln Ala Arg Gln Phe Lys
            180                    185                    190
Pro Cys Ile Lys Gln Ile Asn Phe Pro Thr Asn Leu Ile Arg Leu Glu
        195                    200                    205
Val Asn Ser Ser Leu Leu Glu Tyr Tyr Thr Glu Leu Asp Ala Val Val
    210                    215                    220
Leu His Gly Val Lys Asp Lys Pro Val Leu Ser Leu Lys Thr Ser Leu
225                    230                    235                    240
Ile Asp Met Asn Asp Ile Glu Asp Asp Ala Tyr Ala Glu Lys Asp Gly
                245                    250                    255
Cys Gly Met Asp Ser Leu Asn Lys Phe Ser Ser Ala Val Leu Gly
            260                    265                    270
Glu Gly Pro Asn Asn Gly Tyr Phe Asp Lys Leu Pro Tyr Glu Leu Ile
        275                    280                    285
Gln Leu Ile Leu Asn His Leu Thr Leu Pro Asp Leu Cys Arg Leu Ala
    290                    295                    300
Gln Thr Cys Lys Leu Leu Ser Gln His Cys Cys Asp Pro Leu Gln Tyr
305                    310                    315                    320
Ile His Leu Asn Leu Gln Pro Tyr Trp Ala Lys Leu Asp Asp Thr Ser
                325                    330                    335
Leu Glu Phe Leu Gln Ser Arg Cys Thr Leu Val Gln Trp Leu Asn Leu
            340                    345                    350
Ser Trp Thr Gly Asn Arg Gly Phe Ile Ser Val Ala Gly Phe Ser Arg
        355                    360                    365
Phe Leu Lys Val Cys Gly Ser Glu Leu Val Arg Leu Glu Leu Ser Cys
    370                    375                    380
Ser His Phe Leu Asn Glu Thr Cys Leu Glu Val Ile Ser Glu Met Cys
385                    390                    395                    400
Pro Asn Leu Gln Ala Leu Asn Leu Ser Ser Cys Asp Lys Leu Pro Pro
                405                    410                    415
Gln Ala Phe Asn His Ile Ala Lys Leu Cys Ser Leu Lys Arg Leu Val
            420                    425                    430
Leu Tyr Arg Thr Lys Val Glu Gln Thr Ala Leu Leu Ser Ile Leu Asn
        435                    440                    445
Phe Cys Ser Glu Leu Gln His Leu Ser Leu Gly Ser Cys Ser Val Met Ile
    450                    455                    460
Glu Asp Tyr Asp Val Ile Ala Ser Met Ile Gly Ala Lys Cys Lys Lys
465                    470                    475                    480
Leu Arg Thr Leu Asp Leu Trp Arg Gly Lys Asn Ile Thr Glu Asn Gly
            485                    490                    495
Ile Ala Glu Leu Ala Ser Gly Cys Pro Leu Leu Glu Glu Leu Asp Leu
        500                    505                    510
Gly Trp Cys Pro Thr Leu Gln Ser Ser Thr Gly Cys Phe Thr Arg Leu
    515                    520                    525
Ala His Gln Leu Pro Asn Leu Gln Lys Leu Phe Leu Thr Ala Asn Arg
530                    535                    540
Ser Val Cys Asp Thr Asp Ile Asp Glu Leu Ala Cys Asn Cys Thr Arg
545                    550                    555                    560
Leu Gln Gln Leu Asp Ile Glu Leu Gly Thr Arg Met Val Ser Pro Ala Ser
                565                    570                    575
Leu Arg Lys Leu Leu Glu Ser Cys Lys Asp Leu Ser Leu Leu Asp Val
            580                    585                    590
Ser Phe Cys Ser Gln Ile Asp Asn Arg Ala Val Leu Glu Leu Asn Ala
```

```
          595                  600                  605
Ser Phe Pro Lys Val Phe Ile Lys Lys Ser Phe Thr Gln
    610                  615                  620
```

<210> 6195
<211> 518
<212> DNA
<213> Homo sapiens

<400> 6195
```
ggatcccaag agatattttc tgagctgaac tatgtggtca cagaaggcca gctcccagca
60
gcacgggact atgagggttc gccctgttct gtgtagcccc agctggttcc ctggggaaaa
120
gtttccactt ctgctgtcaa gaaccacaag ggtcaagccc catccctaca aataccaagt
180
acatccaaat tcttcactgg cacagaaatg gtgttacatc cactgggaac aaacctgcat
240
cccacccca aggcatgtga caacagggac tgctaatgag ctttgtccgg gtaactcatt
300
cacgccatca tcttgctctt tccatagtca cttattaagc acaaactatg ccaaaaacta
360
tgtccagcac cgcacaggat ggtaaaatgc cctgagggggc caccccatc tgactcccgt
420
tgagcggagt gggcagccct gcctgggagc tccagcctcc tgcacccacg tgcccccttg
480
ttatctctgc ctggatgcct cacaggcatc tcacgcgt
518
```

<210> 6196
<211> 117
<212> PRT
<213> Homo sapiens

<400> 6196
```
Met Trp Ser Gln Lys Ala Ser Ser Gln Gln His Gly Thr Met Arg Val
1               5                   10                  15
Arg Pro Val Leu Cys Ser Pro Ser Trp Phe Pro Gly Glu Lys Phe Pro
                20                  25                  30
Leu Leu Ser Arg Thr Thr Arg Val Lys Pro His Pro Tyr Lys Tyr
        35                  40                  45
Gln Val His Pro Asn Ser Ser Leu Ala Gln Lys Trp Cys Tyr Ile His
    50                  55                  60
Trp Glu Gln Thr Cys Ile Pro Thr Pro Arg His Val Thr Thr Gly Thr
65                  70                  75                  80
Ala Asn Glu Leu Cys Pro Gly Asn Ser Phe Thr Pro Ser Ser Cys Ser
                85                  90                  95
Phe His Ser His Leu Leu Ser Thr Asn Tyr Ala Lys Asn Tyr Val Gln
        100                 105                 110
His Arg Thr Gly Trp
        115
```

<210> 6197
<211> 2841

```
<212> DNA
<213> Homo sapiens

<400> 6197
nagcattctt ccatctgtag atgtttcagc tgctgtacaa gggagtccca tttcaggtgt
60
ggggctgggc atggtcactc ctgctggatg tctggaaggt gaaaaccaag gacctaggga
120
aataccaggt acagcctttc cccgctcatc cagagcagga caaacaggcc aggtggtatc
180
aggagcccag gtctccagct ggagggaatg tcaaccctgc agtgggagca gggggcccatc
240
acgcatccta ggcacagatg ctaatgcagg cactgcaggt aagctgggct tggtatcctt
300
ccctggcttc agaaagaagc caacaaggag cgttttgcag aatgaaacct ttgttccag
360
aagcactgct gactgtaagt ggttgccgtt tgtggcagtg agcattttgt ccattctgag
420
gttggattgg tttctccttt tggccttgcc ctgccctaca gaccataaag gagaacagca
480
agaagccccc agcaaacatc cacagatggc cctggacatc agccacattc tgaggaacat
540
gtcatgttct gggagggcta aggcatcaag taaggcctgt ggggctggag gatcacaggg
600
caggtggggc aatccagagc catgggggct tcccatggga attgggaggt cccaaggcag
660
agtcagaggt tccacaggag gagtcagaga gtcaccaagg gctctcctgg cccaggggagc
720
agtcaacacc atggactgaa cacccactgg gctccaaccc ttgggccagg ctggggcatg
780
tggggccagg aggcagctca gagtgggagg cagagagaga agtgtgttca gagggcaccc
840
atatctggat gtaatgtggt cctgagactc tggctgggaa gtgcttccag ggtttcatat
900
gtgttatgca gctacttcct ctccccaacc ttaccgtgca ggaatcccag tgaatatgtt
960
gccaccatct tggagctcag tgccctcata gtgtaacagc accagcagat ctgcctgtgc
1020
acagacttcc tgtactacct cactcctgag gggagatgct tctgcagggc ctgcgacctg
1080
gtgcacaact ttnnagacac catcatcctg gagcggcact gcaccctcac tagccagggt
1140
gttgatgact tcctcaatgc caaggccacg ttcaagattt tcgacttcag tgatgcgttt
1200
gtgctgagca aggtgggggctt ctccgggatt ttagttcagg aggtagaatg cagcttgaga
1260
tcaagtgtct gatcaaataa cttgaacttg atctggagag ctctggggag ccatagaagt
1320
tgttggataa aggagggaca gtcgtatatg ttttagagat gactgtggaa ggctgcctgg
1380
aaggagtgaa caagagccag gagaccaggg agggagcttg tggggcaggt ctggagatga
1440
caagggaggg atcctgcttt gatgaaaggt cttcaggaa tgtctcaggt tacactcagg
1500
```

```
tgtcctcaga gctagtgtgt tcaggggtct tgcctccagg atgaaaatga gaaggagttg
1560
tcagacaaga acatataaat gaaggctggc atcttcgtca gtgccaatcg ttgtcctggt
1620
gtggactact gtgggaatag gggtctctcc atccagggac atggtggatg gaccctacat
1680
cactccattc tgcccttcct ttccctccca ttctgagggc ctcagtgcaa gggcgctgtc
1740
caacctctgg tgctgaagca gccgagagac ccaagcctgc cactcaggat atgacagcac
1800
agccagtggc ctctactgga tcctgtacaa cctcagaaga cacctagaca ctgggagtgc
1860
tgccaccacg tggtgcaaga gttctgaggg accgcaattc tgaagacatt gaatgctgct
1920
tcctgctccc tccatggacc tgcacagaat tgtcccatgt ttctgtttgt ttgggcacca
1980
ctgaggaagg aagcatgaag gacgcagagg tcaggccatt ctattgccct cctgctgctg
2040
ggtctttaat cctgagatgg cttcaggggc tggtccttct ccatggcccc ctccacatat
2100
ctcagccatt ttgcaaaccc tggtcagaat gaaacattcc ttgggaactc gggccatgag
2160
aagcatcctt cctgaccacc tgactgcgga aacatcctta tcgcatcctc ccgggcgaag
2220
gcccaacagc ctgactgcag gaacatcctt gccatatcct gccgggcagc aagctctacc
2280
gcccagaccc ctccttccca gtcccatgat cgcccagcc tgtgagcggc agttggtgat
2340
ggcactaagc tgatttcctc ctctgcaggg ttttgctagt aataaaggtg ttgctgttga
2400
agccgtcaac tgtctttcta tgtctttctt taacccttgc cttgccttca aaatctaaca
2460
atagctctac ctctccattt taccaaggag gatatgagac tcaaggagag caagagactt
2520
acccagaatt acacagccag tgagtcacag aacttgaact tgagctcagt tcagctgaat
2580
ccagaactca tgtcttcctg agagtccagg gaaggaaagg tggaactgca gccagtgggt
2640
cccacaggct tgtcctagga gaccacatgc agactcctgg gaattgtgtc ctcttgggca
2700
caaaagaaga actgttcacc tgtgctgcat cagctaagtg tccccattgt cccaaattgt
2760
tatattttt caaagtttca ttttagtaac tagatttctc acagctcagt gttgaaaaca
2820
aagcacagag gcatatagaa a
2841
```

```
<210> 6198
<211> 124
<212> PRT
<213> Homo sapiens
```

```
<400> 6198
Met Gly Ala Ser His Gly Asn Trp Glu Val Pro Arg Gln Ser Gln Arg
```

```
1                    5                   10                  15
Phe His Arg Arg Ser Gln Arg Val Thr Lys Gly Ser Pro Gly Pro Gly
                20                  25                  30
Ser Ser Gln His His Gly Leu Asn Thr His Trp Ala Pro Thr Leu Gly
        35                  40                  45
Pro Gly Trp Gly Met Trp Gly Gln Glu Ala Ala Gln Ser Gly Arg Gln
    50                  55                  60
Arg Glu Lys Cys Val Gln Arg Ala Pro Ile Ser Gly Cys Asn Val Val
65                  70                  75                  80
Leu Arg Leu Trp Leu Gly Ser Ala Ser Arg Val Ser Tyr Val Leu Cys
                85                  90                  95
Ser Tyr Phe Leu Ser Pro Thr Leu Pro Cys Arg Asn Pro Ser Glu Tyr
            100                 105                 110
Val Ala Thr Ile Leu Glu Leu Ser Ala Leu Ile Val
        115                 120
```

<210> 6199
<211> 1777
<212> DNA
<213> Homo sapiens

<400> 6199
ctgcttttcc cagcagtatt agtgtccccc aggcagggga ccttttccac attacatcac
60
tgccccatcc caccttacaa cactctggcc cctctgcttg gtcccctttt tccccaggca
120
ggaggcaatc ccaggggcct gcctgataga ggcatttcct gtccctgtct cctcctgcat
180
ctcctttatc ctgcactgcc acctctatt cccattctg tgttggactt tgaaggcccc
240
aagcccagcc aaagcactga gttccccctt aagacacctc cacaccctcc ccacaagcaa
300
agcacaaatt ttggggtcca tgtagcatgg gccacgtagg aggctcctga cttgccaggg
360
gcccagcctc agcataccca ccgaggcagc tgccagcctg ggctgagggt gggcatgagg
420
caggagtcag cacttggacc tagggatgtg aggttttctg tgccccaagt ttgtgggaag
480
gtgggcacta ctgctgggcc cacagacaca gccagctggc aaaagggagg tctagcccag
540
cagagagatg aggacatttt gcttctcctt catgcccaca gcatgagctg agcttctgct
600
ttgctggaaa tgaaataaac ttggtatgaa ttgtgccaag gcctccccag ttgtcatcct
660
gcctcttgtt gccctccctg tccttgcccc ccacccccaca cccatgcccc tgtttcctta
720
cagattttga tattgttcta atgtgtaata gaaccagccg agtccccttt tatcagaagg
780
gtctgaaaag cagcagcaca gagtaggtga acacaggcct gcaagtgcga ccacctcaga
840
cccagtacgt gtgcccacag tggacacact cacacctcca acacacccac gcgcaggcat
900
gtgtacacgc atgtacacac gcatgcatgc acagccagat ggccactcag cacagatgtg
960
```

```
gcagagggaa tggtctgatc ctgctgaaag ccattaagga gaaacgaatt tcccagtgcc
1020
cgggctgcaa gagagcctta taggggccct gtttcctggg catgcgcttc ctctgccagc
1080
caacccccac ttgcccaagt cactggtgca ataacttttc tgccttcctc agagcagaga
1140
aattgggaat tgtgttaggt gggtgtgggc agctctgctg agccaagcag acacggatgt
1200
cccctcttct gggaggaggg tagtgctccc aggcctcagg agtccagaca gagaccccca
1260
aagcctgact gccaacagaa accctctcct agtgaggggc aggtgggtgt gcccnncagg
1320
tccccacacc cacagggagg cttcacacac tgcccagtac cggggatgcc aggaggcagg
1380
cccctctgct gctgccactg ctgccaacac tgcccagctt gtgaggccag gaggagcccc
1440
tgtcccactc ggtgctgctg ctcttctgac ccctgctgtg aggaatggga ttcttggtcg
1500
aaaaaattgg ttttcctttt ttgtataaat gaaaagaatc caggagaagc tgccaccctc
1560
ccctcccagc gtgatgcgct accttgcttc ggcgtcttgt cgcccttttcc gcctttggtc
1620
cagggacagc ccagcagatc ctcctggttc tgacctgggg ggtgtttgca tcaccccctt
1680
ttacttgtat taaaaaaaaa tgatgggttg aaaatgtact gaggattaaa aatgtacttt
1740
tttataaata aagtgtttaa aacaaaaaaa aaaaaaa
1777
```

<210> 6200
<211> 164
<212> PRT
<213> Homo sapiens

<400> 6200

```
Val Gly Val Gly Ser Ser Ala Glu Pro Ser Arg His Gly Cys Pro Leu
1               5                   10                  15
Phe Trp Glu Glu Gly Ser Ala Pro Arg Pro Gln Glu Ser Arg Gln Arg
            20                  25                  30
Pro Pro Lys Pro Asp Cys Gln Gln Lys Pro Ser Pro Ser Glu Gly Gln
        35                  40                  45
Val Gly Val Pro Xaa Arg Ser Pro His Pro Gln Gly Gly Phe Thr His
    50                  55                  60
Cys Pro Val Pro Gly Met Pro Gly Gly Arg Pro Leu Cys Cys Cys His
65                  70                  75                  80
Cys Cys Gln His Cys Pro Ala Cys Glu Ala Arg Arg Ser Pro Cys Pro
                85                  90                  95
Thr Arg Cys Cys Cys Ser Ser Asp Pro Cys Cys Glu Glu Trp Asp Ser
            100                 105                 110
Trp Ser Lys Lys Leu Val Phe Leu Phe Cys Ile Asn Glu Lys Asn Pro
        115                 120                 125
Gly Glu Ala Ala Thr Leu Pro Ser Gln Arg Asp Ala Leu Pro Cys Phe
    130                 135                 140
Gly Val Leu Ser Pro Phe Pro Pro Leu Val Gln Gly Gln Pro Ser Arg
```

```
145                     150                     155                     160
Ser Ser Trp Phe


<210> 6201
<211> 604
<212> DNA
<213> Homo sapiens

<400> 6201
acgcgtgggc atgtgcacgt gtgtgcctgt gcatgcgtga atatgcgtgt gtgtgcgtgc
60
tgtgctgagg acagcgtgag ttttcacaga agcaggtaaa aagttccaca ggaacagaga
120
ccaggacaag accagccctg atgggagaag ccagaggacc cagaggaact tccaggaggc
180
ccttagctcc ctcagacaga atgcgggatc gcaatgccca gcaaagggca attcaaggac
240
agtggacgct ggggagagga gcagagtggg cagctctcag gagggcagga ctgcgaggct
300
gcaggggagga gttcggtggg aagggacagc ctcagagcct aagctgcgcc tcctgggaaa
360
ggggtatgac tggcaggcac acaaatgtct ctcaaggaag gtgggcctgg ggccacagag
420
ctcccagagg agggagtgga gagggagagc ccgcagagga gagaccaggc agggctggcg
480
atcacgcagg tgcacagggt gaacgtcagg actgaaacgg aagacaatgt ccccatgcaa
540
gactggctga aacgaactca cacagaattt ttaagaggct cctgtgttgg gtgaaaaccg
600
gccg
604


<210> 6202
<211> 124
<212> PRT
<213> Homo sapiens

<400> 6202
Met Gly Glu Ala Arg Gly Pro Arg Gly Thr Ser Arg Arg Pro Leu Ala
1               5                   10                  15
Pro Ser Asp Arg Met Arg Asp Arg Asn Ala Gln Gln Arg Ala Ile Gln
            20                  25                  30
Gly Gln Trp Thr Leu Gly Arg Gly Ala Glu Trp Ala Ala Leu Arg Arg
        35                  40                  45
Ala Gly Leu Arg Gly Cys Arg Glu Glu Phe Gly Gly Lys Gly Gln Pro
    50                  55                  60
Gln Ser Leu Ser Cys Ala Ser Trp Glu Arg Gly Met Thr Gly Arg His
65                  70                  75                  80
Thr Asn Val Ser Gln Gly Arg Trp Ala Trp Gly His Arg Ala Pro Arg
                85                  90                  95
Gly Gly Ser Gly Glu Gly Glu Pro Ala Glu Glu Arg Pro Gly Arg Ala
            100                 105                 110
Gly Asp His Ala Gly Ala Gln Gly Glu Arg Gln Asp
```

115   120

<210> 6203
<211> 3462
<212> DNA
<213> Homo sapiens

<400> 6203
nnaccgttgc ggccgcaggg gtctgggcag ggctgggcag tgctgccgga gcaaaagcgg
60
tagcgggagc ccggccggag ctgggtctgg agacgccgtg gcagcctgaa cggagtgtgc
120
gacggattgg gaggtttgtc tacagatttt gagcgttcga agttgacccc tgactaagta
180
tactttgctg ctccctcagc ctttgaaaaa atgtctgtca catatgatga ttccgttgga
240
gtagaagtgt ccagcgacag cttctgggag gtcgggaact acaagcggac tgtgaagcgg
300
atcgacgatg gccaccgcct gtgcagcgac ctcatgaact gcctgcatga gcgggcgcgc
360
atcgagaagg cgtatgcgca gcagctcact gagtgggccc ggcgctggag gcagctcgtg
420
gagaaagggc cccagtacgg gaccgtggag aaggcctgga tggccttcat gtccgaggca
480
gagagggtga gcgagctgca cctcgaggtg aaggcctcac tgatgaacga tgacttcgag
540
aagatcaaga actggcagaa ggaagccttt cacaagcaga tgatggcgg cttcaaggag
600
accaaggaag ctgaggacgg ctttcggaag gcacagaagc cctgggccaa gaagctgaaa
660
gaggtagaag cagcaaagaa agcccaccat gcagcgtgca aagaggagaa gctggctatc
720
tcacgagaag ccaacagcaa ggcagaccca tccctcaacc ctgaacagct caagaaattg
780
caagacaaaa tagaaaagtg caagcaagat gttcttaaga ccaaagagaa gtatgagaag
840
tccctgaagg aactcgacca gggcacaccc cagtacatgg agaacatgga gcaggtgttt
900
gagcagtgcc agcagttcga ggagaaacgc cttcgcttct tccgggaggt tctgtctggag
960
gttcagaagc acctagacct gtccaatgtg gctggctaca aagccattta ccatgacctg
1020
gagcagagca tcagagcagc tgatgcagtg gaggacctga ggtggttccg agccaatcac
1080
gggccgggca tggccatgaa ctggccgcag tttgaggagt ggtccgcaga cctgaatcga
1140
accctcagcc ggagagagaa gaagaaggcc actgacggcg tcaccctgac gggcatcaac
1200
cagacaggcg accagtctct gccgagtaag cccagcagca cccttaatgt cccgagcaac
1260
cccgcccagt ctgcgcagtc acagtccagc tacaacccct tcgaggatga ggacgacacg
1320
ggcagcaccg tcagtgagaa ggacgacacact aaggccaaaa atgtgagcag ctacgagaag
1380

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acccagagct atcccaccga ctggtcagac gatgagtcta acaacccctt ctcctccacg
1440
gatgccaatg gggactcgaa tccattcgac gacgacgcca cctcggggac ggaagtgcga
1500
gtccgggccc tgtatgacta tgaggggcag gagcatgatg agctgagctt caaggctggg
1560
gatgagctga ccaagatgga ggacgaggat gagcagggct ggtgcaaggg acgcttggac
1620
aacgggcaag ttggcctata cccggcaaat tatgtggagg cgatccagtg atgagtcggg
1680
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1740
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1800
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1920
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1980
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2040
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2100
ctgtgtacag ttatactttt ttatacacct gttcatttct acttaaatta tggcacagat
2160
tgatgcgcac cagtcttgag gaaacgatct ccctattccc ttaccctgtt actcagccac
2220
gccgtgtgta ggcttagcct caggtggcag atgtttgagg aaaggaatta tgccaggaag
2280
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2340
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2400
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2460
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2520
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2580
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2700
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2760
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2820
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2880
acagaagctg ggtcttaccc gcagcacgag tgtctcgggc tgcccggagt cgcccgggag
2940
caggtgctgc agccagagtt acgcgggggc cacgcgggcc ggcgggggtg ggggaacgt
3000
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3060
actccgtttc cagtgagcag atgtcttgct tggaaagtgg acctgtgtct gtgtctgtcc
3120
tgagaactta ccagcagaaa tcctcatttc tgtgctacgg atttaccaaa aattgtcaag
3180
tcttttcag tttaacagtt cctttacatg tgtagtattt gaggaaaaaa atcaataaac
3240
agttgatctc gtgcatatgg aagtcccttc gccatcatct gtcttcatgc ccacttcact
3300
tggcgggggt ggcctccctg gggcttacta gctttggagc tgggcaagat ccagggcaca
3360
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3420
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3462
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<210> 6204
<211> 486
<212> PRT
<213> Homo sapiens
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<400> 6204
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1               5                   10                  15
Ser Phe Trp Glu Val Gly Asn Tyr Lys Arg Thr Val Lys Ser Ile Asp
                20                  25                  30
Asp Gly His Arg Leu Cys Ser Asp Leu Met Asn Cys Leu His Glu Arg
            35                  40                  45
Ala Arg Ile Glu Lys Ala Tyr Ala Gln Gln Leu Thr Glu Trp Ala Arg
        50                  55                  60
Arg Trp Arg Gln Leu Val Glu Lys Gly Pro Gln Tyr Gly Thr Val Glu
65                  70                  75                  80
Lys Ala Trp Met Ala Phe Met Ser Glu Ala Glu Arg Val Ser Glu Leu
                85                  90                  95
His Leu Glu Val Lys Ala Ser Leu Met Asn Asp Asp Phe Glu Lys Ile
            100                 105                 110
Lys Asn Trp Gln Lys Glu Ala Phe His Lys Gln Met Met Gly Gly Phe
        115                 120                 125
Lys Glu Thr Lys Glu Ala Glu Asp Gly Phe Arg Lys Ala Gln Lys Pro
    130                 135                 140
Trp Ala Lys Lys Leu Lys Glu Val Glu Ala Ala Lys Lys Ala His His
145                 150                 155                 160
Ala Ala Cys Lys Glu Gln Lys Leu Ala Ile Ser Arg Glu Ala Asn Ser
                165                 170                 175
Lys Ala Asp Pro Ser Leu Asn Pro Glu Gln Leu Lys Lys Leu Gln Asp
            180                 185                 190
Lys Ile Glu Lys Cys Lys Gln Asp Val Leu Lys Thr Lys Glu Lys Tyr
        195                 200                 205
Glu Lys Ser Leu Lys Glu Leu Asp Gln Gly Thr Pro Gln Tyr Met Glu
    210                 215                 220
Asn Met Glu Gln Val Phe Glu Gln Cys Gln Gln Phe Glu Glu Lys Arg
225                 230                 235                 240
Leu Arg Phe Phe Arg Glu Val Leu Leu Glu Val Gln Lys His Leu Asp
```

```
                    245              250              255
Leu Ser Asn Val Ala Gly Tyr Lys Ala Ile Tyr His Asp Leu Glu Gln
            260              265              270
Ser Ile Arg Ala Ala Asp Ala Val Glu Asp Leu Arg Trp Phe Arg Ala
        275              280              285
Asn His Gly Pro Gly Met Ala Met Asn Trp Pro Gln Phe Glu Glu Trp
    290              295              300
Ser Ala Asp Leu Asn Arg Thr Leu Ser Arg Arg Glu Lys Lys Lys Ala
305              310              315              320
Thr Asp Gly Val Thr Leu Thr Gly Ile Asn Gln Thr Gly Asp Gln Ser
            325              330              335
Leu Pro Ser Lys Pro Ser Ser Thr Leu Asn Val Pro Ser Asn Pro Ala
        340              345              350
Gln Ser Ala Gln Ser Gln Ser Ser Tyr Asn Pro Phe Glu Asp Glu Asp
        355              360              365
Asp Thr Gly Ser Thr Val Ser Glu Lys Asp Asp Thr Lys Ala Lys Asn
    370              375              380
Val Ser Ser Tyr Glu Lys Thr Gln Ser Tyr Pro Thr Asp Trp Ser Asp
385              390              395              400
Asp Glu Ser Asn Asn Pro Phe Ser Ser Thr Asp Ala Asn Gly Asp Ser
            405              410              415
Asn Pro Phe Asp Asp Ala Thr Ser Gly Thr Glu Val Arg Val Arg
            420              425              430
Ala Leu Tyr Asp Tyr Glu Gly Gln Glu His Asp Glu Leu Ser Phe Lys
        435              440              445
Ala Gly Asp Glu Leu Thr Lys Met Glu Asp Glu Asp Glu Gln Gly Trp
        450              455              460
Cys Lys Gly Arg Leu Asp Asn Gly Gln Val Gly Leu Tyr Pro Ala Asn
465              470              475              480
Tyr Val Glu Ala Ile Gln
            485
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<210> 6205
<211> 926
<212> DNA
<213> Homo sapiens

<400> 6205
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120
agccagaagt tgctgttcat ggaaacttcg gccaaactga accaccaggt gtcggaggtg
180
ttcaatacag tggcccaaga gctactgcag agaacgacg aggaggggcca ggctctacng
240
ggggaagaca cccctgcct gggccatggc cagctctagg tggattctga ttcactgtca
300
atgctgggtt gctcccgagc cctgatgtt cctggaagtt ggccccttt atgaaaacca
360
cttccacag ccagtgggaa ctgccagagg aagatctggc gtcacatggc tcccaggaaa
420
gtgctgtgcc ctatccccac tgataccatc tgattcccg atgcctgtgc ctgttccacc
480
```

```
tggacggtgg cccccctcagc ctggcagcct ctggacagag aggaaggaag gattggaaaa
540
gtccccgcag cacagcgacg gtgggaagat gccttacgtc tgatcttgat gggggcactg
600
gcctggagcc tgggcccacc tgcttctggg gggttgggga gcaggccaga tggaggtggt
660
ggtgccagaa gaaaatggag cgatgactga ctgtggggtg ggcccaggat ttccgcatct
720
tggtgaagtt gcccctggga agggcagctg ggggcagtgg cgccagttcc cttccatggt
780
ctcccggctg gcaatgtggt gaagctgagt ttctgtccaa tgagcaggaa gattctgaga
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900
cttttgacaa tctgaaaaaa aaaaaa
926
```

<210> 6206
<211> 92
<212> PRT
<213> Homo sapiens

<400> 6206
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Xaa Arg Leu Pro Xaa Arg Ile Gly Pro Ser Phe Asn Gly Gly Cys Gly
 1               5                   10                  15
Glu Met Glu Lys Trp Gly Glu Asp Phe Gly Glu Ser Arg Gly Arg Ala
            20                  25                  30
Arg Glu Gly Lys Glu Phe Ala Asp Ser Gln Lys Leu Leu Phe Met Glu
        35                  40                  45
Thr Ser Ala Lys Leu Asn His Gln Val Ser Glu Val Phe Asn Thr Val
    50                  55                  60
Ala Gln Glu Leu Leu Gln Arg Ser Asp Glu Glu Gly Gln Ala Leu Xaa
65                  70                  75                  80
Gly Glu Asp Thr Pro Cys Leu Gly His Gly Gln Leu
            85                  90
```

<210> 6207
<211> 1384
<212> DNA
<213> Homo sapiens

<400> 6207
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tgggggtgcc tgtgagtgtg ctggggcgtc tgcagtgaag gcctcctgag accactccac
120
ggaaacaccg ggaatccctg cagctgagcc tgtctctcac gggaccggga agctggagag
180
agccccaacc ctgcccgctg gggccgagct ccctgctcct gcagcagtcc cgtgccccac
240
actctgagtc tgccctatcc acagctgctg ggcctcctctg tggccaccat ggtgactctt
300
acctacttcg gggcccactt tgctgtcatc cgccgagcgt ccctggagaa gaacccgtac
360
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caggctgtgc accaatgggc cttctctgcg gggttgagcc tggtgggcct cctgactctg
420
ggagccgtgc tgagcgctgc agccaccgtg agggaggccc agggcctcat ggcagggggc
480
ttcctgtgct tctccctggc gttctgtygca caggtgcagg tggtgttctg gagactccac
540
agcccaccc aggtggagga cgccatgctg gacacctacg acctggtata tgagcaggcg
600
atgaaaggta cgtcccacgt ccggcggcag gagctggcgg ccatccagga cgtgtttctg
660
tgctgtggga agaagtctcc tttcagccgt ctggggagca cagaggctga cctgtgtcag
720
ggagaggagg cggcgagaga ggactgcctt cagggcatcc ggagcttcct gaggacacac
780
cagcaggtcg cctccagcct gaccagcatc ggcctggcc tcacggtgtc cgccttgctc
840
ttcagctcct tcctgtggtt tgccatccgc tgtggctgca gcttggaccg caagggcaaa
900
tacaccctga ccccacgagc atgtggccgc cagccccagg agcccagcct cttgagatgc
960
tcccaggtg gacccacaca ttgtctccac tccgaagcag ttgctattgg tccaagagga
1020
tgctcgggta gtcttccggtg gctgcaggag agcgatgctg cgcctctgcc cctctcctgc
1080
cacctggctg cccacagagc tctccagggc agaagtcgcg gtgggctcag tgggtgccct
1140
gagcggggtc tctcagactg acgtcaggcc ttggtgggct gcactctcac ctggaggctc
1200
cggggaagca tctgcctcca ggaccattca ggctgttgac aagtcaactc ctcatggctg
1260
taggactgag gttcccaagt ccttgtccct ggtcctgtgg tccctccacc ttcaaaccag
1320
caatggtgca ttgagcaaat tgtggtcaaa tatacatcac atcaaattta ccatcttaaa
1380
aaaa
1384


<210> 6208
<211> 290
<212> PRT
<213> Homo sapiens

<400> 6208
Met Val Thr Leu Thr Tyr Phe Gly Ala His Phe Ala Val Ile Arg Arg
1               5                   10                  15
Ala Ser Leu Glu Lys Asn Pro Tyr Gln Ala Val His Gln Trp Ala Phe
            20                  25                  30
Ser Ala Gly Leu Ser Leu Val Gly Leu Leu Thr Leu Gly Ala Val Leu
        35                  40                  45
Ser Ala Ala Ala Thr Val Arg Glu Ala Gln Gly Leu Met Ala Gly Gly
    50                  55                  60
Phe Leu Cys Phe Ser Ser Leu Ala Ala Xaa Ala Gln Val Gln Val Val Phe
65                  70                  75                  80
Trp Arg Leu His Ser Pro Thr Gln Val Glu Asp Ala Met Leu Asp Thr
```

```
                      85                  90                  95
Tyr Asp Leu Val Tyr Glu Gln Ala Met Lys Gly Thr Ser His Val Arg
              100                 105                 110
Arg Gln Glu Leu Ala Ala Ile Gln Asp Val Phe Leu Cys Cys Gly Lys
          115                 120                 125
Lys Ser Pro Phe Ser Arg Leu Gly Ser Thr Glu Ala Asp Leu Cys Gln
      130                 135                 140
Gly Glu Glu Ala Ala Arg Glu Asp Cys Leu Gln Gly Ile Arg Ser Phe
145                 150                 155                 160
Leu Arg Thr His Gln Gln Val Ala Ser Ser Leu Thr Ser Ile Gly Leu
              165                 170                 175
Ala Leu Thr Val Ser Ala Leu Leu Phe Ser Ser Phe Leu Trp Phe Ala
          180                 185                 190
Ile Arg Cys Gly Cys Ser Leu Asp Arg Lys Gly Lys Tyr Thr Leu Thr
      195                 200                 205
Pro Arg Ala Cys Gly Arg Gln Pro Gln Glu Pro Ser Leu Leu Arg Cys
      210                 215                 220
Ser Gln Gly Gly Pro Thr His Cys Leu His Ser Glu Ala Val Ala Ile
225                 230                 235                 240
Gly Pro Arg Gly Cys Ser Gly Ser Leu Arg Trp Leu Gln Glu Ser Asp
              245                 250                 255
Ala Ala Pro Leu Pro Leu Ser Cys His Leu Ala Ala His Arg Ala Leu
          260                 265                 270
Gln Gly Arg Ser Arg Gly Gly Leu Ser Gly Cys Pro Glu Arg Gly Leu
      275                 280                 285
Ser Asp
    290


<210> 6209
<211> 2269
<212> DNA
<213> Homo sapiens

<400> 6209
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acccacacca ggtggactta caaggctgtg tgtgccctgg gcagggtgga catgtccagg
120
gcgggggaaac cctggatatt tcactctgaa gtggtttctt gaaagaaaac tcaactgact
180
caggccatga gcatctttta cactgaagca agcatctcct cacaagtgcc tcctacaagt
240
cactagagtc atattcaaca ttacaaaatg cagtgctact aaattttaa agcactgagg
300
gaccaagaaa tgggctgatc aagtccttgg ccactcactg ttaagagcca ggatttacag
360
atcaatgact gttcctattg tccaagaaat aattttctag caaagcatac acactttatt
420
aaatttcaca gccagcagcg ctttcagtcc acaacagatt tctcagagga aacatggata
480
ttttgcgtag gcagaaacag tgaggagtac aaagcaaagc tataaatacc accaatggtt
540
ctgctatgtg catccgatat tttttgcccg atctgaaata ctgcaagggc ttaaccattc
600
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aaacaccgca tgacaacgaa cccagtggac tgtgaaactc aggctgcagg agggtggctt
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gtcagctggt gaagccactt ggctttggac tccatcggtc atctttacgc aagagcagag
720
atgaacggtg ggtcacggct atgacgtgaa ggagaaagag aagacacact cacagaacag
780
gatggagagc ttcaataatt ttttaaaagc ttggaaccac cacctgcttt cccaatcttg
840
ggctggggt ttgacttttc ttgatcatca atctgacttg aagccttta ccagttacaa
900
tacagacatg gccagatgac ctgcttgtta ggaaggctgt ggccatcttt gtttctgaaa
960
cagtcttatc tcatctgtcc actgctgctc tggaagggtc aggaccagca ctgcagacac
1020
tcggccatgc tgtgagtgag cccagacata cgcgtggaat ctgaacaccc aacgctggcg
1080
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1140
tctagttcct ccactgcctg gcttcctcgc ttgcaaaacc cagcatgtga aatgaggaca
1200
cctccacgga gacccttccg agcagggagg tttcatcaca cctttcgttc ttgccaagga
1260
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1320
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1380
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1440
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1500
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1620
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1860
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1920
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1980
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2040
ctgagcttgt cctactattc agatgatttt ctctctgagt tgcaatactg ctcaatttag
2100
gtggctacct gtgttcattc aagctctgga agtgtggaag ggaacttaat cattgagttt
2160
ctgtgaagta ttttgccatc ctaaaatccc tgagagtgaa actgttgaat catgctcact
2220
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2269

<210> 6210
<211> 165
<212> PRT
<213> Homo sapiens

<400> 6210
Met Gly Ile Phe Leu Thr Leu Cys Phe Pro Val Gln Lys His Asn Thr
 1   5   10   15
Ser Phe Arg Arg Asn Val Ser Gln Ser Val Thr Thr Lys Ala Leu Leu
            20   25   30
Ser Pro Ser Leu Arg Gly Thr His Leu Leu Phe Leu Pro Gln Ala Asp
        35   40   45
Val Val Asp Glu Ala Ile Asp Ser Leu Ala Arg Thr Lys Gly Val Met
    50   55   60
Lys Pro Pro Cys Ser Glu Gly Ser Pro Trp Arg Cys Pro His Phe Thr
65   70   75   80
Cys Trp Val Leu Gln Ala Arg Lys Pro Gly Ser Gly Gly Thr Arg Glu
                85   90   95
Arg Gln Ala Cys Val Trp Thr Ser Ala Gly Ala Ala Ala Leu Arg Leu
            100   105   110
Ala Arg Glu Arg Gln Arg Trp Val Phe Arg Phe His Ala Tyr Val Trp
        115   120   125
Ala His Ser Gln His Gly Arg Val Ser Ala Val Leu Val Leu Thr Leu
    130   135   140
Pro Glu Gln Gln Trp Thr Asp Glu Ile Arg Leu Phe Gln Lys Gln Arg
145   150   155   160
Trp Pro Gln Pro Ser
                165

<210> 6211
<211> 2163
<212> DNA
<213> Homo sapiens

<400> 6211
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120
gcaaatttgg agcgacagat ctatgctttt gagggaagct acctggaaga cactcagatg
180
tatggcaata ttattcgtgg ctggngatcg gtatctgacc aaccannaaa aaactccaat
240
agcaaaaatg atcgaaggaa ccggaagttt aaggaagctg agcggctctt cagtaaatcc
300
tcggttacct cagcagctgc agtaagtgca ttggcaggag ttcaggacca gctcattgaa
360
aagagggagc caggaagtgg gacggaaagt gacacttctc cagacttcca caatcaggaa
420
aatgagccca gccaggagga ccctgaggat ctggatggat ctgtgcaggg agtgaaacct
480

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cagaaggctg cttcttctac ttcctcaggg agtcaccaca gcagccataa aaagcgaaag
540
aataaaaacc ggcacagccc gtctggcatg tttgattatg actttgagat tgatctgaag
600
ttaaacaaaa aaccacgagc tgactattag aagacacatt agtgcagaag cttccaggct
660
gtagagccct gcttcccttc tctgacctca caaagataaa catccttcac ctgagttcgt
720
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780
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840
aacagaactg caggaagatc aagacaatgt tgtaatcccg gcaagttgct aactgtgcgt
900
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960
tacccttcaa gaaatgttct ctggttttgt tttatgctga aagtagaaca caagtcacat
1020
ttcagatgga ggctgtaaat atctggcatt ttcttatatt gttttatgtt ttcttgtttt
1080
tctcttgttg tttttatctt attttctttg gggtttttttt gtaatgcctt tgtacagctc
1140
atactttcct gctgacatat ctgatcatct ctttcatgca gttgccaata ttcataactg
1200
aaaataatct ggtttatcat aagtaaaatg ggaaacttgc ctctgtttttt tgcaaggggа
1260
ggtaaagagt gtttagtaat tacctatctt aaatctttct gagttggtag tagattcatg
1320
ttcaaggaac aggaaaaatg gaaaaacata agtttaaatc agttcttttt aaataacttt
1380
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1440
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1500
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1560
tatggaaagt ctcaaaatta taccaaaagt gataacttat gtcgttctta agtggagtga
1620
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1860
gattctgata agaagccagg ttgagaacca ctacattaga agactgaatg gtttaattta
1920
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1980
tagttagtca gtagtccttga cttatgccta tatctttgta agaaatagta tgtttcattt
2040
gtgatagtat tggtagggct gaatatggat ggcatctact gtaaaacaag tctaccttgt
2100
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cagatgtgca aaagctttca ctcttgttct caaataaact tttgtgggtt tttttaaaaa
2160
aaa
2163

<210> 6212
<211> 209
<212> PRT
<213> Homo sapiens

<400> 6212
Xaa Arg Pro Pro Gln Pro Asn Met Ala Met His Asn Lys Ala Ala Pro
1   5   10   15
Pro Gln Ile Pro Asp Thr Arg Arg Glu Leu Ala Glu Leu Val Lys Gly
            20   25   30
Lys Gln Glu Leu Ala Glu Thr Leu Ala Asn Leu Glu Arg Gln Ile Tyr
        35   40   45
Ala Phe Glu Gly Ser Tyr Leu Glu Asp Thr Gln Met Tyr Gly Asn Ile
    50   55   60
Ile Arg Gly Trp Xaa Ser Val Ser Asp Gln Pro Xaa Lys Asn Ser Asn
65   70   75   80
Ser Lys Asn Asp Arg Arg Asn Arg Lys Phe Lys Glu Ala Glu Arg Leu
                85   90   95
Phe Ser Lys Ser Ser Val Thr Ser Ala Ala Val Ser Ala Leu Ala
            100   105   110
Gly Val Gln Asp Gln Leu Ile Glu Lys Arg Glu Pro Gly Ser Gly Thr
        115   120   125
Glu Ser Asp Thr Ser Pro Asp Phe His Asn Gln Glu Asn Glu Pro Ser
    130   135   140
Gln Glu Asp Pro Glu Asp Leu Asp Gly Ser Val Gln Gly Val Lys Pro
145   150   155   160
Gln Lys Ala Ala Ser Ser Thr Ser Ser Gly Ser His His Ser Ser His
                165   170   175
Lys Lys Arg Lys Asn Lys Asn Arg His Ser Pro Ser Gly Met Phe Asp
            180   185   190
Tyr Asp Phe Glu Ile Asp Leu Lys Leu Asn Lys Lys Pro Arg Ala Asp
        195   200   205
Tyr

<210> 6213
<211> 1160
<212> DNA
<213> Homo sapiens

<400> 6213
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ggccccactg ttgggatgct ggctgcagtg gggcgcccca agcccaggtc ccctctgtct
120
tctctttcga ctttgcagct gtacttgttt tgctcctcta cccgcaggag ctgacatgga
180
cccaaatcct cgggccgccc tggagcgcca gcagctccgc cttcggggagc ggcaaaaatt
240

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cttcgaggac attttacagc cagagacaga gtttgtcttt cctctgtccc atctgcatct
300
cgagtcgcag agacccccca taggtagtat ctcatccatg gaagtgaatg tggacacact
360
ggagcaagta gaacttattg accttgggga cccggatgca gcagatgtgt tcttgccttg
420
cgaagatcct ccaccaaccc cccagtcgtc tggggtggac aaccatttgg aggagctgag
480
cctgccnggt gcctacatca gacaggacca catctaggac ctcctcctcc tcctcctccg
540
actcctccac caacctgcat agcccaaatc caagtgatga tggagcagat acgcccttgg
600
cacagtcgga tgaagaggag gaaaggggtg atggagggc agagcctgag gcctgcagct
660
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720
cccagccaga gcctgtcggg agaagaccag actctttact tgcagtaggc accagaggtg
780
ggaaggatgg tgggattgtg tacctttcta agaattaacc ctctcctgct ttactgctaa
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900
atgaggagag agaagatgag gttggacaag atgccactgc ttttcttagc actcttccct
960
cccctaaacc atcccgtagt cttctaatac agtctctcag acaagtgtct ctagatggat
1020
gtgaactcct taactcatca agtaaggtgg tactcaagcc atgctgcctc cttacatcct
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1140
aaaaaaaaaa aaaaaaaaaa
1160


<210> 6214
<211> 101
<212> PRT
<213> Homo sapiens

<400> 6214
Pro Trp Gly Pro Gly Cys Ser Arg Cys Val Leu Ala Leu Arg Arg Ser
 1               5                   10                  15
Ser Thr Asn Pro Pro Val Val Trp Gly Gly Gln Pro Phe Gly Gly Ala
                20                  25                  30
Glu Pro Ala Xaa Cys Leu His Gln Thr Gly Pro His Leu Gly Pro Pro
        35                  40                  45
Pro Pro Pro Pro Pro Thr Pro Pro Pro Thr Cys Ile Ala Gln Ile Gln
    50                  55                  60
Val Met Met Glu Gln Ile Arg Pro Trp His Ser Arg Met Lys Arg Arg
65                  70                  75                  80
Lys Gly Val Met Glu Gly Gln Ser Leu Glu Pro Ala Ala Ser Ser Gly
                85                  90                  95
Pro Leu Pro Thr Asp
            100
```

<210> 6215
<211> 651
<212> DNA
<213> Homo sapiens

<400> 6215
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tccacaatag cctcacaggt cccctgtaga acattccacc acagccccat gatcccttg
120
ctcctcagag catgtggccg ccagccccag gagcccagcc tcttgagatg ctcccagggt
180
ggacccacac attgtctcca ctccgaagca gttgctattg gtccaagagg atgctcgggt
240
agtcttcggt ggctgcagga gagcgatgct gcgcctctgc ccctctcctg ccacctggct
300
gcccacagag ctctccaggg cagaagtcgc ggtgggctca gtgggtgccc tgagcggggt
360
ctctcagact gacgtcaggc cttggtgggc tgcactctca cctggaggct ccggggaagc
420
atctgcctcc aggaccattc aggctgttga caagtcaact cctcatggct gtaggactga
480
ggttcccaag tcctgtccc tggtcctgtg gtccctccac cttcaaacca gcaatggtgc
540
attgagcaaa ttgtggtcaa atatacatca catcaaattt accatcttaa ccattgttaa
600
gtgtatggtt tgtggcatta aatacattca cattgttgtg caaccatcac c
651

<210> 6216
<211> 87
<212> PRT
<213> Homo sapiens

<400> 6216
Met Ile Pro Leu Leu Leu Arg Ala Cys Gly Arg Gln Pro Gln Glu Pro
1   5   10   15
Ser Leu Leu Arg Cys Ser Gln Gly Gly Pro Thr His Cys Leu His Ser
            20   25   30
Glu Ala Val Ala Ile Gly Pro Arg Gly Cys Ser Gly Ser Leu Arg Trp
        35   40   45
Leu Gln Glu Ser Asp Ala Ala Pro Leu Pro Leu Ser Cys His Leu Ala
    50   55   60
Ala His Arg Ala Leu Gln Gly Arg Ser Arg Gly Gly Leu Ser Gly Cys
65   70   75   80
Pro Glu Arg Gly Leu Ser Asp
                85

<210> 6217
<211> 2955
<212> DNA
<213> Homo sapiens

<400> 6217

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ccggcccatc cgtgggggcg acttgagcgt tgagggcgcg cgggggaggcg agccaccatg
120
ttcagccagc agcagcagca gcagctccag caacagcagc agcagctcca gcagttacag
180
cagcagcagc tccagcagca gcaattgcag cagcagcagt tactgcagct ccagcagctg
240
ctccagcagt ccccaccaca ggccccgttg cccatggctg tcagccgggg gctcccccccg
300
cagcagccac agcagccgct tctgaatctc cagggcacca actcagcctc cctcctcaac
360
ggctccatgc tgcagagagc tttgctttta cagcagttgc aaggactgga ccagtttgca
420
atgccaccag ccacgtatga cactgccggt ctcaccatgc ccacagcaac actgggtaac
480
ctccgaggct atggcatggc atccccaggc ctcgcagccc ccagcctcac accccacaa
540
ctggccactc caaatttgca acagttcttt ccccaggcca ctcgccagtc cttgctggga
600
cctcctcctg ttgggtcccc catgaaccct tcccagttca acctttcagg acggaacccc
660
cagaaacagg cccggacctc ctcctctacc acccccaatc gaaaggattc ttcttctcag
720
acaatgcctg tggaagacaa gtcagacccc ccagaggggt ctgaggaagc cgcagagccc
780
cggatggaca caccagaaga ccaagattta ctgcccctgcc cagaggacat cgccaaggaa
840
aaacgcactc cagcacctga gcctgagcct tgtgaggcgt ccgagctgcc agcaaagaga
900
ttgaggagct cagaagagcc cacagagaag gaacctccag ggcagttaca ggtgaaggcc
960
cagccgcagg cccggatgac agtaccgaaa cagacacaga caccagacct gctgcctgag
1020
gccctggaag cccaagtgct gccacgattc cagccacggg tcctgcaggt ccaggcccag
1080
gtgcagtcac agactcagcc gcggatacca tccacagaca cccaggtgca gccaaagctg
1140
cagaagcagg cgcaaacaca gacctctcca gagcacttag tgctgcaaca gaagcaggtg
1200
cagccacagc tgcagcagga ggcagagcca cagaagcagg tgcagccaca ggtacagcca
1260
caggcacatt cacagggccc aaggcaggtg cagctgcagc aggaggcaga gccgctgaag
1320
caggtgcagc cacaggtgca gccccaggca cattcacagc ccccaaggca ggtgcagctg
1380
cagctgcaga agcaggtcca gacacagaca tatccacagg tccacacaca ggcacagcca
1440
agcgtccagc cacaggagca tcctccagcg caggtgtcag tacagccacc agagcagacc
1500
catgagcagc ctcacacccca gccgcaggtg tcgttgctgg ctccagagca aacaccagtt
1560
gtggttcatg tctgcgggct ggagatgcca cctgatgcag tagaagctgg tggaggcatg
1620
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gaaaagacct tgccagagcc tgtgggcacc caagtcagca tggaagagat tcagaatgag
1680
tcggcctgtg gcctagatgt gggagaatgt gaaaacagag cgagagagat gccaggggta
1740
tggggcgccg ggggctccct gaaggtcacc attctgcaga gcagtgacag ccgggccttt
1800
agcactgtac ccctgacacc tgtccccgc cccagtgact ccgtctcctt cacccctgcg
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1920
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1980
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2040
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2100
tactacatgg gggacctgat ccaacaccgc aggacacagg accacagat tgccaaacaa
2160
tccttgcgac ccttctgcac cgtttgcaac cgctacttca aaaccccctcg caagtttgtg
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2280
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2340
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2580
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2700
tccagcggcc gcccaccctc ccagcccaac acccaggaca aaacacccag caaggtgacg
2760
gctcgaccct cccagccccc actacctcgg cgctcaaccc gcctcaaaac ctgatagagg
2820
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2940
aaaaaaaaaa aaaaa
2955


<210> 6218
<211> 133
<212> PRT
<213> Homo sapiens

<400> 6218
Val Arg Ser Arg Asp Ile Ser Arg Glu Glu Trp Lys Gly Ser Glu Thr
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```
1                    5                    10                   15
Tyr Ser Pro Asn Thr Ala Tyr Gly Val Asp Phe Leu Val Pro Val Met
                20                   25                   30
Gly Tyr Ile Cys Arg Ile Cys His Lys Phe Tyr His Ser Asn Ser Gly
        35                   40                   45
Ala Gln Leu Ser His Cys Lys Ser Leu Gly His Phe Glu Asn Leu Gln
    50                   55                   60
Lys Tyr Lys Ala Ala Lys Asn Pro Ser Pro Thr Thr Arg Pro Val Ser
65                   70                   75                   80
Arg Arg Cys Ala Ile Asn Ala Arg Asn Ala Leu Thr Ala Leu Phe Thr
                85                   90                   95
Ser Ser Gly Arg Pro Pro Ser Gln Pro Asn Thr Gln Asp Lys Thr Pro
            100                  105                  110
Ser Lys Val Thr Ala Arg Pro Ser Gln Pro Pro Leu Pro Arg Arg Ser
        115                  120                  125
Thr Arg Leu Lys Thr
        130
```

<210> 6219
<211> 2495
<212> DNA
<213> Homo sapiens

<400> 6219
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tttttttttt ttttttcgcg gtggaggatc aggtttaatg gtcactatga gggtatcgta
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catcgttcca agcccggccc ccgcccccagc cctccctcag ctgggaacac agccaggtgc
120
cctcagaccc ctggctctgc acaaggggg cctgcccct cgccccagnn ctatatacac
180
gacagcccat cctgctggcc gtggacaaaa gctgggagct ccntgtgccc agtcaggagc
240
ccctacagtc caccagctgc gcggccgggt ccagggngcc cactgtggtg ccagcgagtt
300
tctcaaaacc cagggcccag ccccagcnnt gggccctgc caagccccag gcctgtgtgc
360
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420
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540
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600
ggagactcgg ccagtgtaga cagacccaga gactcggcca gtgtagacag agccaggctg
660
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720
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780
gggggtgccta cactgtaact agcagcatag tgcttaacta gttaacaaga aatgctgctt
840
ccctttgaat tgtttcgggg gtgtagaaat tgcacttatt tctatgaacc ccatggaggg
900
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atgcccacag ctgagcctcc aggcgaggca tggcaggtca gtgcctggcc gctgagcatc
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1020
tgcagcgagg accggaaccc acaggggggaa cctgagcaac gtctgaggtg ccctgaagtg
1080
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1200
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1320
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cagcattttc cagatcttgg ctcccttgtg gtagacgttc agcttcctct ctatctcctc
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1680
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1860
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1920
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1980
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2100
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2160
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2220
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2280
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2400
ccgctgccgc cgcccttca ccaccgccag ctcaatggcc tccgcctcag ggctgggcag
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2495
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<210> 6220
<211> 179
<212> PRT
<213> Homo sapiens

<400> 6220
Phe Phe Phe Phe Phe Ser Arg Trp Arg Ile Arg Phe Asn Gly His Tyr
1               5                   10                  15
Glu Gly Ile Val His Arg Ser Lys Pro Gly Pro Arg Pro Ser Pro Pro
            20                  25                  30
Ser Ala Gly Asn Thr Ala Arg Cys Pro Gln Thr Pro Gly Ser Ala Gln
        35                  40                  45
Gly Gly Pro Ala Pro Ser Pro Gln Xaa Tyr Ile His Asp Ser Pro Ser
    50                  55                  60
Cys Trp Pro Trp Thr Lys Ala Gly Ser Ser Xaa Cys Pro Val Arg Ser
65                  70                  75                  80
Pro Tyr Ser Pro Pro Ala Ala Arg Pro Gly Pro Gly Xaa Pro Leu Trp
                85                  90                  95
Cys Gln Arg Val Ser Gln Asn Pro Gly Pro Ser Pro Ser Xaa Gly Pro
            100                 105                 110
Leu Pro Ser Pro Arg Pro Val Cys Trp Asp Gly Ala Ser Thr Leu Arg
        115                 120                 125
Leu Val Lys Ala Glu Leu Asn Ser Ser Asn Glu Ser Ala Gly Trp Ala
    130                 135                 140
Trp Gly Asp Gly Glu Gln Ala Pro Pro Arg Ala Ser Ser Glu Gly Gly
145                 150                 155                 160
Asp Ala Ala Pro Phe Leu Pro Ala Ala Gln Thr Ala Pro Thr Gly Ser
                165                 170                 175
Gly Ala Gly


<210> 6221
<211> 1487
<212> DNA
<213> Homo sapiens

<400> 6221
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ttagggcacc ctggatgccc cttgattcca ccctcattac ttgtcctctc tcggtgctgc
120
ctcttgttcc cttgctttgt tttgttttca tattactccc gtatttcctg acatatctgc
180
attttttctac ttactgtgtc ccgatgcagc tgctcctgtt tttcacatcc aaggtttctc
240
ctccatggca ctactgacgt tttgggctga cgaattcttt ggggacagga tggggcatgt
300
cctgtgcatt ttaggatgtt gagtagcagc cctggcctgc atccactaga tgccagttga
360
acctccccag gttctgaagc cagacacaag atgaaaaagc taactccaaa acagaaattt
420
tctgaagatt tagagtcata taagatatca gtggtaatgc aggaatcagc tgagaaactt
480
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tcagaaaagt tacataagtg taaagaattt gtggacagtt gcaggcttac tttccctact
540
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600
gcgcaaacaa ggtggaagca gggcagatat gatgaggatg gcaaaccctt caatcaaaga
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720
tgtggaaaag tcattaggcg taaggcatgg tttgatcaac atcaaagaat tcacttttta
780
gagaatcctc ttgagtgtaa ggtctgtggg caagccttca gacagcggtc agctcttacg
840
gtccataaac agtgtcacct gcaaaacaag ccatacagat gtcatgactg tggaaagtgt
900
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960
aaatgtagca aatgtgaaaa aacgtttagt cagaattcaa cccttattcg acatcaggtg
1020
atccatagtg gagaaaaacg ccataaatgc cttgagtgtg gaaaagcctt tggccggcat
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1140
tgtggacagt cctttggtag gaatgtggat ctcattcagc atcaaagaat ccatacaaag
1200
gaggaattct ttcaatgtgg agaatgtggg aaaacgttta gttttaagag gaatctttt
1260
cgacatcagg tcattcacac tggaagccaa ctctaccaat gtgtcatatg tggaaaatct
1320
ttcaagtggc acacaagctt tattaagcac cagggcactc acaaaggaca gatatccaca
1380
tgatgttaat tggaaagcag tcattggaga actagaactt ataaacctct acttcaagtg
1440
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1487

<210> 6222
<211> 330
<212> PRT
<213> Homo sapiens

<400> 6222
Met Lys Lys Leu Thr Pro Lys Gln Lys Phe Ser Glu Asp Leu Glu Ser
 1               5                   10                  15
Tyr Lys Ile Ser Val Val Met Gln Glu Ser Ala Glu Lys Leu Ser Glu
                20                  25                  30
Lys Leu His Lys Cys Lys Glu Phe Val Asp Ser Cys Arg Leu Thr Phe
            35                  40                  45
Pro Thr Ser Gly Asp Glu Tyr Ser Arg Gly Phe Leu Gln Asn Leu Asn
        50                  55                  60
Leu Ile Gln Asp Gln Asn Ala Gln Thr Arg Trp Lys Gln Gly Arg Tyr
65                  70                  75                  80
Asp Glu Asp Gly Lys Pro Phe Asn Gln Arg Ser Leu Leu Leu Gly His
                85                  90                  95
Glu Arg Ile Leu Thr Arg Ala Lys Ser Tyr Glu Cys Ser Glu Cys Gly
```

```
              100                  105                 110
Lys Val Ile Arg Arg Lys Ala Trp Phe Asp Gln His Gln Arg Ile His
         115                  120                 125
Phe Leu Glu Asn Pro Phe Glu Cys Lys Val Cys Gly Gln Ala Phe Arg
    130                  135                 140
Gln Arg Ser Ala Leu Thr Val His Lys Gln Cys His Leu Gln Asn Lys
145                  150                 155                 160
Pro Tyr Arg Cys His Asp Cys Gly Lys Cys Phe Arg Gln Leu Ala Tyr
              165                 170                 175
Leu Val Glu His Lys Arg Ile His Thr Lys Glu Lys Pro Tyr Lys Cys
         180                  185                 190
Ser Lys Cys Glu Lys Thr Phe Ser Gln Asn Ser Thr Leu Ile Arg His
    195                  200                 205
Gln Val Ile His Ser Gly Glu Lys Arg His Lys Cys Leu Glu Cys Gly
    210                  215                 220
Lys Ala Phe Gly Arg His Ser Thr Leu Leu Cys His Gln Gln Ile His
225                  230                 235                 240
Ser Lys Pro Asn Thr His Lys Cys Ser Glu Cys Gly Gln Ser Phe Gly
              245                 250                 255
Arg Asn Val Asp Leu Ile Gln His Gln Arg Ile His Thr Lys Glu Glu
         260                  265                 270
Phe Phe Gln Cys Gly Glu Cys Gly Lys Thr Phe Ser Phe Lys Arg Asn
    275                  280                 285
Leu Phe Arg His Gln Val Ile His Thr Gly Ser Gln Leu Tyr Gln Cys
    290                  295                 300
Val Ile Cys Gly Lys Ser Phe Lys Trp His Thr Ser Phe Ile Lys His
305                  310                 315                 320
Gln Gly Thr His Lys Gly Gln Ile Ser Thr
              325                 330
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<210> 6223
<211> 944
<212> DNA
<213> Homo sapiens

<400> 6223

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120
cccaacttc ccatccccc actcctctc attccctctc ttgcttgtgc gcataagcaa
180
gtcccactca ttgcaactgt aaccaatacc aagcatgaga acaggaacta gctccaccct
240
ctaacccca ctccagctgc agacgccacg gagtttgtgt aggggcgcag cgctccagcc
300
atggcgcgtt cgctcgtcca cgacaccgtg ttctactgcc tgagtgtata ccaggtaaaa
360
ataagcccca cacctcagct gggggcagca tcaagcgcag aaggccatgt tggccaagga
420
gctccaggcc tcatgggtaa tatgaaccct gagggcggtg tgaaccacga gaacggcatg
480
aaccgcgatg gcggcatgat ccccgagggc ggcggtggaa accaggagcc tcggcagcag
540
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ccgcagcccc cgccggagga gccggcccag gcggccatgg agggtccgca gcccgagaac
600
atgcagccac gaactcggcg cacgaagttc acgctgttgc aggtggagga gctggaaagt
660
gttttccgac acactcaata ccctgatgtg cccacaagaa gggaacttgc cgaaaactta
720
ggtgtgactg aagacaaagt gcgggtcagt cacttgaaa aagcaatttg agaggacagc
780
cattctaaaa cctgcttcag ggcattgaag gctttgaagg ctttgtcctg aacgttctaa
840
agttgttgtt tttattattg tcttttttat gttgacaaat aagttttgaa gtttgggttc
900
cttgtcggta gaaaaggaag taagctccag cttatggttc tttc
944

<210> 6224
<211> 156
<212> PRT
<213> Homo sapiens

<400> 6224
Met Ala Arg Ser Leu Val His Asp Thr Val Phe Tyr Cys Leu Ser Val
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Tyr Gln Val Lys Ile Ser Pro Thr Pro Gln Leu Gly Ala Ala Ser Ser
            20   25   30
Ala Glu Gly His Val Gly Gln Gly Ala Pro Gly Leu Met Gly Asn Met
        35   40   45
Asn Pro Glu Gly Gly Val Asn His Glu Asn Gly Met Asn Arg Asp Gly
    50   55   60
Gly Met Ile Pro Glu Gly Gly Gly Asn Gln Glu Pro Arg Gln Gln
65   70   75   80
Pro Gln Pro Pro Pro Glu Glu Pro Ala Gln Ala Ala Met Glu Gly Pro
                85   90   95
Gln Pro Glu Asn Met Gln Pro Arg Thr Arg Arg Thr Lys Phe Thr Leu
                100   105   110
Leu Gln Val Glu Glu Leu Glu Ser Val Phe Arg His Thr Gln Tyr Pro
            115   120   125
Asp Val Pro Thr Arg Arg Glu Leu Ala Glu Asn Leu Gly Val Thr Glu
    130   135   140
Asp Lys Val Arg Val Ser Thr Leu Glu Lys Ala Ile
145   150   155

<210> 6225
<211> 3851
<212> DNA
<213> Homo sapiens

<400> 6225
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120
gaacagaaga cagatgccct gggggaaacag tctgtgaaca gaggattcac taaggacaag
180

5406

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300
aagtttgatt tgatctggaa ccgggctcag tcctgtccaa catttctatg tgctctgcca
360
agaagggaag gttatgagtt ttttgtagga caatggacag gtactgaact ccacttcact
420
gcacttataa atattccagac ccgagggggaa gctgcagcca gccagctgat tttatatcac
480
tatcctgaac ttaaggaaga aaagggcata gtgctgatga ctgcagaaat ggattccaca
540
tttctgaatg ttgctgaggc acagtgcatc gccaaccaag ttcagctctt ctacgctact
600
gatcggaaag agacctacgg gttagtggag acctttaacc tcagaccaaa tgagttcaaa
660
tatatgtctg tcatcgctga attggagcaa agcggacttg gagcagaact gaaatgtgcc
720
cagaaccaaa ataagactta gaactgtaca ggttggccct tcacctagtt gactcagccc
780
tcgatagtct agagcccacc ccctcctcag gaactcaaga gctcagcatt tataatgagc
840
agttggtaat gagttgccct atgtgcttgt cgcaagcagt cacagagatg agccctatta
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cccaaatgat gagtttgtca tctttatgaa ctcatgacag gataataagc ttgaagacct
1140
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1320
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1620
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1680
aactcatctt gggactgaaa aattgtttgg aatgccagaa ataagaaagt tgttctccag
1740
agctggaaac ccatctttcg tttgtagtgt cactgttgtg gctccaagct cagtgatagg
1800
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aaaggacggt ggttacacac cagccttctg aacccaaggc ccccagtatt gttgtcagct
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1920
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1980
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2040
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2100
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2160
caggtgtgag ccaccgtgcc tggcctgaca tttctttatt gatctaacat gctccactct
2220
gctgctcctg cctaagatct ggttatatga cactgaatgt ggtgagtggg aatttaagca
2280
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2340
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2400
tgttgcacct ttgagtctat gtattgagag agacagatag tatttttta aactgggaa
2460
gctgctatcc tttcactatt tctctaaagg ttgagctgtt aactaatgta aattctggac
2520
ctgcttctgg tcctggcagt ttatcttttg agaaacttga gtcttatctg ccctgccatt
2580
ttcattaaat gccttctgac cttctgaatg ttttgggtcc caagaatttt tgacatcaga
2640
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2700
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2820
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3180
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3240
tcagatgtgt agatcattct ttattccagt taaaagaaca aactttatct catcagttct
3300
gaaactttaa gatgcagtag catcacctaa agtgcttta aaatgcagat tctcaggcct
3360
caaccgtaca ccacccccc acacacgtac taaatcaaga atatgtgcag aaggtactgg
3420
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gaatctactt gttaatatgt gctccaaatg attctgatgt aggtaattag ccagccacac
3480
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3540
ctgtggatgc taactatagg atatttaggt tcctctgttc tttgtctccc atagtggccc
3600
cctttgcaaa ctccaaatac attatattta tttattcttg tgtctttttt cccccactag
3660
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3720
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aaaaaaaaaa a
3851


<210> 6226
<211> 246
<212> PRT
<213> Homo sapiens

<400> 6226
Xaa Ile Gln Leu Leu Arg Arg Ser Asp Pro Ala Ala Phe Glu Ser Arg
 1               5                   10                  15
Leu Glu Lys Arg Ser Glu Phe Arg Lys Gln Pro Val Gly His Ser Arg
                20                  25                  30
Gln Gly Asp Phe Ile Lys Cys Val Glu Gln Lys Thr Asp Ala Leu Gly
            35                  40                  45
Lys Gln Ser Val Asn Arg Gly Phe Thr Lys Asp Lys Thr Leu Ser Ser
        50                  55                  60
Ile Phe Asn Ile Glu Met Val Lys Glu Lys Thr Ala Glu Glu Ile Lys
65                  70                  75                  80
Gln Ile Trp Gln Gln Tyr Phe Ala Ala Lys Asp Thr Val Tyr Ala Val
                85                  90                  95
Ile Pro Ala Glu Lys Phe Asp Leu Ile Trp Asn Arg Ala Gln Ser Cys
                100                 105                 110
Pro Thr Phe Leu Cys Ala Leu Pro Arg Arg Glu Gly Gly Tyr Glu Phe Phe
            115                 120                 125
Val Gly Gln Trp Thr Gly Thr Glu Leu His Phe Thr Ala Leu Ile Asn
        130                 135                 140
Ile Gln Thr Arg Gly Glu Ala Ala Ala Ser Gln Leu Ile Leu Tyr His
145                 150                 155                 160
Tyr Pro Glu Leu Lys Glu Glu Lys Gly Ile Val Leu Met Thr Ala Glu
                165                 170                 175
Met Asp Ser Thr Phe Leu Asn Val Ala Glu Ala Gln Cys Ile Ala Asn
                180                 185                 190
Gln Val Gln Leu Phe Tyr Ala Thr Asp Arg Lys Glu Thr Tyr Gly Leu
            195                 200                 205
Val Glu Thr Phe Asn Leu Arg Pro Asn Glu Phe Lys Tyr Met Ser Val
        210                 215                 220
Ile Ala Glu Leu Glu Gln Ser Gly Leu Gly Ala Glu Leu Lys Cys Ala
225                 230                 235                 240
Gln Asn Gln Asn Lys Thr
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245

<210> 6227
<211> 830
<212> DNA
<213> Homo sapiens

<400> 6227
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cttggaggca gcacctacag agcggtgatt ttcgacatgg gcggagttct cattccttct
120
ccagggagag tcgctgcaga atgggaggta cagaatcgta tcccttctgg aactatatta
180
aaggccttga tggaaggtgg tgaaaatggg ccctggatga gatttatgag agcagaaata
240
acagcagagg gtttttttacg agaatttggg agactttgct ctgaaatgtt aaagacctcc
300
gtgcctgtgg actcattttt ctctctgttg accagtgagc gagtggcaaa gcagttccca
360
gtgatgactg aggccataac tcaaattcgg gcaaaaggtc ttcagactgc agtcttgagc
420
aataattttt atcttcccaa ccagaaaagc tttttgcccc tggaccggaa acagtttgat
480
gtgattgtgg agtcctgcat ggaagggatc tgtaagccag accctaggat ctacaagctg
540
tgcttggagc agctcggcct gcagccctct gagtccatct ttcttgatga ccttggaaca
600
aatctaaaag aagctgccag acttggtatt cacaccatta aggttaatga cccagagact
660
gcagtaaagg aattagaagc tctcttgggt tttacattga gagtaggtgt tccaaacact
720
cggcctgtga aaaagacgat ggaaattccg aaagattcct tgcagaagta cctcaaagac
780
ttactgggta tccagaccac aggcccattg gaactacttc agtttgatca
830

<210> 6228
<211> 271
<212> PRT
<213> Homo sapiens

<400> 6228
Lys His Thr Gln Arg Arg His Gln Gly Ser His Arg Trp Thr His Leu
1   5   10   15
Gly Gly Ser Thr Tyr Arg Ala Val Ile Phe Asp Met Gly Gly Val Leu
            20   25   30
Ile Pro Ser Pro Gly Arg Val Ala Ala Glu Trp Glu Val Gln Asn Arg
        35   40   45
Ile Pro Ser Gly Thr Ile Leu Lys Ala Leu Met Gly Gly Gly Glu Asn
    50   55   60
Gly Pro Trp Met Arg Phe Met Arg Ala Glu Ile Thr Ala Glu Gly Phe
65   70   75   80
Leu Arg Glu Phe Gly Arg Leu Cys Ser Glu Met Leu Lys Thr Ser Val

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                    85                    90                    95
Pro Val Asp Ser Phe Phe Ser Leu Leu Thr Ser Glu Arg Val Ala Lys
                   100                   105                   110
Gln Phe Pro Val Met Thr Glu Ala Ile Thr Gln Ile Arg Ala Lys Gly
               115                   120                   125
Leu Gln Thr Ala Val Leu Ser Asn Asn Phe Tyr Leu Pro Asn Gln Lys
           130                   135                   140
Ser Phe Leu Pro Leu Asp Arg Lys Gln Phe Asp Val Ile Val Glu Ser
145                   150                   155                   160
Cys Met Glu Gly Ile Cys Lys Pro Asp Pro Arg Ile Tyr Lys Leu Cys
                   165                   170                   175
Leu Glu Gln Leu Gly Leu Gln Pro Ser Glu Ser Ile Phe Leu Asp Asp
               180                   185                   190
Leu Gly Thr Asn Leu Lys Glu Ala Ala Arg Leu Gly Ile His Thr Ile
           195                   200                   205
Lys Val Asn Asp Pro Glu Thr Ala Val Lys Glu Leu Glu Ala Leu Leu
       210                   215                   220
Gly Phe Thr Leu Arg Val Gly Val Pro Asn Thr Arg Pro Val Lys Lys
225                   230                   235                   240
Thr Met Glu Ile Pro Lys Asp Ser Leu Gln Lys Tyr Leu Lys Asp Leu
                   245                   250                   255
Leu Gly Ile Gln Thr Thr Gly Pro Leu Glu Leu Leu Gln Phe Asp
           260                   265                   270
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<210> 6229
<211> 3105
<212> DNA
<213> Homo sapiens

<400> 6229
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120
tgtgacgtcc ccaccaacgg ctgcggaccc gaccgctgga actccgcgtt cacccgcaaa
180
gacgagatca tcaccagcct cgtgtctgcc ttagactcca tgtgctcagc gctgtccaaa
240
ctgaacgccg aggtggcctg tgtcgccgtg cacgatgaga gcgcctttgt ggtgggcaca
300
gagaagggga gaatgttcct gaatgcccgg aaggagctac agtcagactt cctcaggttc
360
tgccgagggc cccgtggaa ggatccggag gcagagcacc ccaagaaggt gcagcggggc
420
gagggtggag gccgtagcct ccctcggtcc tccctggaac atggctcaga tgtgtacctt
480
ctgcggaaga tggtagagga ggtgtttgat gttctttata gcgaggccct gggaagggcc
540
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600
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660
gccatcctgg aacacagcca ccgcatccgc ttcaagctca agaggccact tgaggatggc
720

gggcgggact cgaaggccct ggtggagctg aacggtgtct ccctgattcc caaggggtca
780
cgggactgtg gcctgcatgg ccaggccccc aaggtgccac cccaggacct gcccccaacc
840
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900
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960
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1020
aagcccactg ggctggtgg gcctctcatc cagaacgtcc atgcctccaa gcgcattctc
1080
ttctccatcg tccatgacaa gtcagagaag tgggacgcct tcataaagga aaccgaggac
1140
atcaacacgc tccgggagtg tgtgcagatc ctgtttaaca gcagatatgc ggaagccctg
1200
ggcctgggca acatggtccc cgtgccctac cggaagattg cctgtgaccc ggaggctgtg
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1320
aagctgaagc ggatcctgga ggagcgccat agtatccact tcatcattaa gaggatgttt
1380
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1440
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1620
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2100
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2160
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2220
atcaagtacc cggtccaggt cccctacaag cggatcaaga gtaaccccgg ctccgtgatc
2280
atcgaggggc tgccccagg aatcccgttc cgaaagccct gtaccttcgg ctcccagaac
2340

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ctggagagga ttcttgctgt ggctgacaag atcaagttca cagtcaccag gcctttccaa
2400
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2460
cgggagcagg tgaaggaact cttcaacgag aaatacggtg aggccctggg cctgaaccgg
2520
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2700
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3105
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<210> 6230
<211> 944
<212> PRT
<213> Homo sapiens
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<400> 6230
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Pro Asp Arg Trp Asn Ser Ala Phe Thr Arg Lys Asp Glu Ile Ile Thr
                20                  25                  30
Ser Leu Val Ser Ala Leu Asp Ser Met Cys Ser Ala Leu Ser Lys Leu
            35                  40                  45
Asn Ala Glu Val Ala Cys Val Ala Val His Asp Glu Ser Ala Phe Val
        50                  55                  60
Val Gly Thr Glu Lys Gly Arg Met Phe Leu Asn Ala Arg Lys Glu Leu
65                  70                  75                  80
Gln Ser Asp Phe Leu Arg Phe Cys Arg Gly Pro Pro Trp Lys Asp Pro
                85                  90                  95
Glu Ala Glu His Pro Lys Lys Val Gln Arg Gly Glu Gly Gly Gly Arg
            100                 105                 110
Ser Leu Pro Arg Ser Ser Leu Glu His Gly Ser Asp Val Tyr Leu Leu
        115                 120                 125
Arg Lys Met Val Glu Glu Val Phe Asp Val Leu Tyr Ser Glu Ala Leu
    130                 135                 140
Gly Arg Ala Ser Val Val Pro Leu Pro Tyr Glu Arg Leu Leu Arg Glu
145                 150                 155                 160
Pro Gly Leu Leu Ala Val Gln Gly Leu Pro Glu Gly Leu Ala Phe Arg
```

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                 165                   170                   175
Arg Pro Ala Glu Tyr Asp Pro Lys Ala Leu Met Ala Ile Leu Glu His
            180                   185                   190
Ser His Arg Ile Arg Phe Lys Leu Lys Arg Pro Leu Glu Asp Gly Gly
            195                   200                   205
Arg Asp Ser Lys Ala Leu Val Glu Leu Asn Gly Val Ser Leu Ile Pro
     210                   215                   220
Lys Gly Ser Arg Asp Cys Gly Leu His Gly Gln Ala Pro Lys Val Pro
225                   230                   235                   240
Pro Gln Asp Leu Pro Pro Thr Ala Thr Ser Ser Ser Met Ala Ser Phe
                 245                   250                   255
Leu Tyr Ser Thr Ala Leu Pro Asn His Ala Ile Arg Glu Leu Lys Gln
            260                   265                   270
Glu Ala Pro Ser Cys Pro Leu Ala Pro Ser Asp Leu Gly Leu Ser Arg
            275                   280                   285
Pro Met Pro Glu Pro Lys Ala Thr Gly Ala Gln Asp Phe Ser Asp Cys
     290                   295                   300
Cys Gly Gln Lys Pro Thr Gly Pro Gly Gly Pro Leu Ile Gln Asn Val
305                   310                   315                   320
His Ala Ser Lys Arg Ile Leu Phe Ser Ile Val His Asp Lys Ser Glu
                 325                   330                   335
Lys Trp Asp Ala Phe Ile Lys Glu Thr Glu Asp Ile Asn Thr Leu Arg
            340                   345                   350
Glu Cys Val Gln Ile Leu Phe Asn Ser Arg Tyr Ala Glu Ala Leu Gly
     355                   360                   365
Leu Gly Asn Met Val Pro Val Pro Tyr Arg Lys Ile Ala Cys Asp Pro
     370                   375                   380
Glu Ala Val Glu Ile Val Gly Ile Pro Asp Lys Ile Pro Phe Lys Arg
385                   390                   395                   400
Pro Cys Thr Tyr Gly Val Pro Lys Leu Lys Arg Ile Leu Glu Glu Arg
                 405                   410                   415
His Ser Ile His Phe Ile Ile Lys Arg Met Phe Asp Glu Arg Ile Phe
            420                   425                   430
Thr Gly Asn Lys Phe Thr Lys Asp Thr Thr Lys Leu Glu Pro Ala Ser
            435                   440                   445
Pro Pro Glu Asp Thr Ser Ala Glu Val Ser Arg Ala Thr Val Leu Asp
     450                   455                   460
Leu Ala Gly Asn Ala Arg Ser Asp Lys Gly Ser Met Ser Glu Asp Cys
465                   470                   475                   480
Gly Pro Gly Thr Ser Gly Glu Leu Gly Gly Leu Arg Pro Ile Lys Ile
                 485                   490                   495
Glu Pro Glu Asp Leu Asp Ile Ile Gln Val Thr Val Pro Asp Pro Ser
            500                   505                   510
Pro Thr Ser Glu Glu Met Thr Asp Ser Met Pro Gly His Leu Pro Ser
     515                   520                   525
Glu Asp Ser Gly Tyr Gly Met Glu Met Leu Thr Asp Lys Gly Leu Ser
     530                   535                   540
Glu Asp Ala Arg Pro Glu Glu Arg Pro Val Glu Asp Ser His Gly Asp
545                   550                   555                   560
Val Ile Arg Pro Leu Arg Lys Gln Val Glu Leu Leu Phe Asn Thr Arg
                 565                   570                   575
Tyr Ala Lys Ala Ile Gly Ile Ser Glu Pro Val Lys Val Pro Tyr Ser
            580                   585                   590
Lys Phe Leu Met His Pro Glu Glu Leu Phe Val Val Gly Leu Pro Glu
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          595                 600                 605
Gly Ile Ser Leu Arg Arg Pro Asn Cys Phe Gly Ile Ala Lys Leu Arg
   610                 615                 620
Lys Ile Leu Glu Ala Ser Asn Ser Ile Gln Phe Val Ile Lys Arg Pro
625                 630                 635                 640
Glu Leu Leu Thr Glu Gly Val Lys Glu Pro Ile Val Asp Ser Gln Glu
               645                 650                 655
Arg Asp Ser Gly Asp Pro Leu Val Asp Glu Ser Leu Lys Arg Gln Gly
           660                 665                 670
Phe Gln Glu Asn Tyr Asp Ala Arg Leu Ser Arg Ile Asp Ile Ala Asn
       675                 680                 685
Thr Leu Arg Glu Gln Val Gln Asp Leu Phe Asn Lys Lys Tyr Gly Glu
   690                 695                 700
Ala Leu Gly Ile Lys Tyr Pro Val Gln Val Pro Tyr Lys Arg Ile Lys
705                 710                 715                 720
Ser Asn Pro Gly Ser Val Ile Ile Glu Gly Leu Pro Pro Gly Ile Pro
               725                 730                 735
Phe Arg Lys Pro Cys Thr Phe Gly Ser Gln Asn Leu Glu Arg Ile Leu
           740                 745                 750
Ala Val Ala Asp Lys Ile Lys Phe Thr Val Thr Arg Pro Phe Gln Gly
       755                 760                 765
Leu Ile Pro Lys Pro Asp Glu Asp Asp Ala Asn Arg Leu Gly Glu Lys
   770                 775                 780
Val Ile Leu Arg Glu Gln Val Lys Glu Leu Phe Asn Glu Lys Tyr Gly
785                 790                 795                 800
Glu Ala Leu Gly Leu Asn Arg Pro Val Leu Val Pro Tyr Lys Leu Ile
               805                 810                 815
Arg Asp Ser Pro Asp Ala Val Glu Val Thr Gly Leu Pro Asp Asp Ile
           820                 825                 830
Pro Phe Arg Asn Pro Asn Thr Tyr Asp Ile His Arg Leu Glu Lys Ile
       835                 840                 845
Leu Lys Ala Arg Glu His Val Arg Met Val Ile Ile Asn Gln Leu Gln
   850                 855                 860
Pro Phe Ala Glu Ile Cys Asn Asp Ala Lys Val Pro Ala Lys Asp Ser
865                 870                 875                 880
Ser Ile Pro Lys Arg Lys Arg Lys Arg Val Ser Glu Gly Asn Ser Val
               885                 890                 895
Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Asn Pro Asp Ser
           900                 905                 910
Val Ala Ser Ala Asn Gln Ile Ser Ser Leu Val Gln Trp Pro Met Tyr Met
       915                 920                 925
Val Asp Tyr Ala Gly Leu Asn Val Gln Leu Pro Gly Pro Leu Asn Tyr
   930                 935                 940
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<210> 6231
<211> 471
<212> DNA
<213> Homo sapiens

<400> 6231
tgatcattgg gatcacttgt tggaatggcc gggttcctgt gcaggcacct agcaaatgtc
60
taccaatgac aggccctact cacagccact gcactccagc ttgggcgaca gaacgaggcc
120

```
ttgccttttt aaaaaaaaaa aaaaggctca aaaaaagagt atgctgggcc aaaaatctgg
180
cccctcaggc ctcctgacct ggaggagaaa aaggggcccg aagcccccg ttgcccccat
240
ctccatatgg aatggcacaa cccctcgagg ggaacccccc cctaaccata gttctaaaaa
300
ggggacaaaa aaatgggcgc tggatttttc aacgccggaa acccaattcc cacccctgg
360
ccggccgttc ttagggattc caacttggga cccaacctgg gcgtattctg ggccttactt
420
gtttcttgtg ggaattggta ttccgttccc atttcccca ccttccaacc c
471
```

```
<210> 6232
<211> 138
<212> PRT
<213> Homo sapiens
```

```
<400> 6232
Met Ser Thr Asn Asp Arg Pro Tyr Ser Gln Pro Leu His Ser Ser Leu
1               5                   10                  15
Gly Asp Arg Thr Arg Pro Cys Leu Phe Lys Lys Lys Lys Ala Gln
            20                  25                  30
Lys Lys Ser Met Leu Gly Gln Lys Ser Gly Pro Ser Gly Leu Leu Thr
        35                  40                  45
Trp Arg Arg Lys Arg Gly Pro Lys Pro Pro Val Ala Pro Ile Ser Ile
    50                  55                  60
Trp Asn Gly Thr Thr Pro Arg Gly Glu Pro Pro Pro Asn His Ser Ser
65                  70                  75                  80
Lys Lys Gly Thr Lys Lys Trp Ala Leu Asp Phe Ser Thr Pro Glu Thr
                85                  90                  95
Gln Phe Pro Pro Pro Gly Arg Pro Phe Leu Gly Ile Pro Thr Trp Asp
            100                 105                 110
Pro Thr Trp Ala Tyr Ser Gly Pro Tyr Leu Phe Leu Val Gly Ile Gly
        115                 120                 125
Ile Pro Phe Pro Phe Pro Pro Ser Asn
    130                 135
```

```
<210> 6233
<211> 894
<212> DNA
<213> Homo sapiens
```

```
<400> 6233
acgcgtgaag ggaaaaagag aaggcgctgt cccgctcttg ctacggtggc ctggaggagt
60
ggcgaaaccg gaacagagaa tttatcactt ctgggactca cagtcgtgat gtcttcaag
120
agggaaggag acgattggag tcaactcaat gtgctcaaaa aaagaagagt cggggacctc
180
ctagccagtt acattccaga ggatgaggcg ctgatgcttc gggatggacg ctttgcttgt
240
gccatctgcc cccatcgacc ggtactggac accctggcca tgctgactgc caccgtgca
300
```

```
ggcaagaaac atctgtccag cttgcagctt ttctatggca agaagcagcc gggaaaggaa
360
agaaagcaga atccaaaaca tcagaatgaa ttgagaaggg aagaaaccaa agctgaggct
420
cctctgctaa ctcagacacg acttatcacc cagagtgctc tgcacagagc tccccactat
480
aacagttgct gccgccggaa gtacagacca gaagcccctg gtccctctgt ctccctttcc
540
cctatgccac cctcagaggt caaactccaa agtgggaaga tcagtaggga acctgaacct
600
gcggctggcc cacaggccga ggagtcagca actgtctcag cccctgcacc catgagcccc
660
acaagaagac gagccctgga ccattatctc acccttcgaa gctctgtgatg gatcccagat
720
ggacgaggtc gatgggtaaa agatgaaaat gttgagtttg actctgatga ggaggaacca
780
cctgatctcc ccttggactg ataccctttt cccattcatt cacaaataaa ttacaatggg
840
tgctgagaac ttaaaaaaaa aaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaa
894
```

<210> 6234
<211> 230
<212> PRT
<213> Homo sapiens

<400> 6234

```
Met Ser Phe Lys Arg Glu Gly Asp Asp Trp Ser Gln Leu Asn Val Leu
1               5                   10                  15
Lys Lys Arg Arg Val Gly Asp Leu Leu Ala Ser Tyr Ile Pro Glu Asp
            20                  25                  30
Glu Ala Leu Met Leu Arg Asp Gly Arg Phe Ala Cys Ala Ile Cys Pro
        35                  40                  45
His Arg Pro Val Leu Asp Thr Leu Ala Met Leu Thr Ala His Arg Ala
    50                  55                  60
Gly Lys Lys His Leu Ser Ser Leu Gln Leu Phe Tyr Gly Lys Lys Gln
65                  70                  75                  80
Pro Gly Lys Glu Arg Lys Gln Asn Pro Lys Gln Asn Glu Leu Arg
            85                  90                  95
Arg Glu Glu Thr Lys Ala Glu Ala Pro Leu Leu Thr Gln Thr Arg Leu
            100                 105                 110
Ile Thr Gln Ser Ala Leu His Arg Ala Pro His Tyr Asn Ser Cys Cys
        115                 120                 125
Arg Arg Lys Tyr Arg Pro Glu Ala Pro Gly Pro Ser Val Ser Leu Ser
    130                 135                 140
Pro Met Pro Pro Ser Glu Val Lys Leu Gln Ser Gly Lys Ile Ser Arg
145                 150                 155                 160
Glu Pro Glu Pro Ala Ala Gly Pro Gln Ala Glu Glu Ser Ala Thr Val
                165                 170                 175
Ser Ala Pro Ala Pro Met Ser Pro Thr Arg Arg Arg Ala Leu Asp His
            180                 185                 190
Tyr Leu Thr Leu Arg Ser Ser Gly Trp Ile Pro Asp Gly Arg Gly Arg
        195                 200                 205
Trp Val Lys Asp Glu Asn Val Glu Phe Asp Ser Asp Glu Glu Glu Pro
```

```
          210                     215                     220
Pro Asp Leu Pro Leu Asp
225                     230

<210> 6235
<211> 3427
<212> DNA
<213> Homo sapiens

<400> 6235
cctagggcgc ccgaacccgc ggcggcggtg gggacaatgt ggttctttgc ccgggacccg
60
gtccgggact ttccgttcga gctcatcccg gagccccag agggcggcct gcccgggccc
120
tgggccctgc accgcggccg caagaaggcc acaggcagcc ccgtgtccat cttcgtctat
180
gatgtgaagc ctggcgcgga agagcagacc caggtggcca aagctgcctt caagcgcttc
240
aaaactctac ggcaccccaa catcctggct tacatcgatg gactggagac agaaaaatgc
300
ctccacgtcg tgacagaggc tgtgaccccg ttgggaatat acctcaaggc gagagtggag
360
gctggtggcc tgaaggagct ggagatctcc tgggggctac accagatcgt gaaagccctc
420
agcttcctgg tcaacgactg cagcctcatc cacaacaatg tctgcatggc cgccgtgttc
480
gtggaccgag ctggcgagtg gaagcttggg ggcctggact acatgtattc ggcccagggc
540
aacggtgggg gacctccccg caaggggatc cccgagcttg agcagtatga cccccggag
600
ttggctgaca gcagtggcag agtggtcaga gagaagtggt cagcagacat gtggcgcttg
660
ggctgcctca tttgggaagt cttcaatggg ccctacctc gggcagcagc cctacgcaac
720
cctgggaaga tccccaaaac gctggtgccc cattactgtg agctggtggg agcaaacccc
780
aaagtacgtc ccaacccagc ccgcttcctg cagaactgcc gggcacctgg tggcttcatg
840
agcaaccgct ttgtggagac caacctgttc ctggaggaga ttcagatcaa agagccagcc
900
gagaagcaaa aattcttcca gagctgagc aagagcctgg acgcattccc tgaggatttc
960
tgtcggcaca aggtgctgcc ccagctgctg accgccttcg agttcggcaa tgctggggcc
1020
gttgtcctca cgcccctctt caaggtgggc aagttcctga gcgctgagga gtatcagcag
1080
aagatcatcc ctgtggtggt caagatgttc tcatccactg accgggccat gcgcatccgc
1140
ctcctgcagc agatggagca gttcatccag taccttgacg agccaacagt caacacccag
1200
atcttcccccc acgtcgtaca tggcttcctg gacaccaacc ctgccatccg gagcagacg
1260
gtcaagtcca tgctgctcct ggccccaaag ctgaacgagg ccaacctcaa tgtggagctg
1320
```

```
atgaagcact ttgcacggct acaggccaag gatgaacagg gccccatccg ctgcaacacc
1380
acagtctgcc tgggcaaaat cggctcctac ctcagtgcta gcaccagaca cagggtcctt
1440
acctctgcct tcagccgagc cactagggac ccgtttgcac cgtcccgggt tgcgggtgtc
1500
ctgggctttg ctgccaccca caacctctac tcaatgaacg actgtgccca gaagatcctg
1560
cctgtgctct gcggtctcac tgtagatcct gagaaatccg tgcgagacca ggccttcaag
1620
gccattcgga gcttcctgtc caaattggag tctgtgtcgg aggacccgac ccagctggag
1680
gaagtggaga aggatgtcca tgcagcctcc agccctggca tgggaggagc cgcagctagc
1740
tgggcaggct gggccgtgac cggggtctcc tcactcacct ccaagctgat ccgttcgcac
1800
ccaaccactg ccccaacaga aaccaacatt ccccaaagac ccacgcctga aggagttcct
1860
gccccagccc ccacccctgt tcctgccacc cctacaacct caggccactg ggagacgcag
1920
gaggaggaca aggacacagc agaggacagc agcactgctg acagatggga cgacgaagac
1980
tggggcagcc tggagcagga ggccgagtct gtgctggccc agcaggacga ctggagcacc
2040
gggggccaag tgagccgtgc tagtcaggtc agcaactccg accacaaatc ctccaaatcc
2100
ccagagtccg actggagcag ctgggaagct gagggctcct gggaacaggg ctggcaggag
2160
ccaagctccc aggagccacc tcctgacggt acacggctgg ccagcgagta taactggggt
2220
ggcccagagt ccagcgacaa gggcgacccc ttcgctaccc tgtctgcacg tcccagcacc
2280
cagccgaggc cagactcttg gggtgaggac aactgggagg gcctcgagac tgacagtcga
2340
caggtcaagg ctgagctggc ccggaagaag cgcgaggagc ggcggcggga gatggaggcc
2400
aaacgcgccg agaggaaggt ggccaagggc cccatgaagc tgggagcccg gaagctggac
2460
tgaaccgtgg cggtggccct tcccggctgc ggagagcccg ccccacagat gtatttattg
2520
tacaaaccat gtgagccggg ccggcccagc caggccatct cacgtgtaca taatcagagc
2580
cacaataaat tctatttcac accccttgtg ccgggctcag tctagccct gggaggcggc
2640
tggggtctgg cgccgcctgc gcagcccgcg cccacgtcag acgtgaacat caatttgctt
2700
cgaaagccaa gggtaaagag gcacgatctg atttatcagt ttctaggaaa caccctctgg
2760
gaggaaggca ggcagcgccc gccggagacc ttacaaccgc ccgctaaccg gggaggggg
2820
ccggtagggg cgcctcgggt ctcaaggcgc cgggagggtc tgcgggccct gaaggtcct
2880
gggtccgagc cacaagtcgg ggcagaagtg aggccgagct cgcggaaatc cctcagtgat
2940
```

```
caccgaggtc tgggccgagg gcggcgtcgg cggcgtcagc ggcggcgctg gggaacgcag
3000
gccccgtgcg ggcggctgcg cgcgaagccg gctttgcaga cgcagcggaa ggagccgctg
3060
gtgttcacgc agcgctcgct cttgcacagc agcccgcgct ggttcagctc tcggcactcg
3120
tcgatatcca cgcagcgggc gcgggaggcg tcgagctgga agccgccggg acactcgcac
3180
acggcgccgc ccggccgcgg cacgcagcgg ccactcacgc agcgacactc gtctgaatcc
3240
tcctctgaac tgtcctcatc tcttgagggc ttcactccca cccaggacca gcacggttgt
3300
gaggaggtgg agcagcccca ccacaagaag gagtgctacc tgaacttcga tgacacagtg
3360
ttctgcgaca gcgtattggc caccaacgtg acccagcagg agtgctgctg ctctctgggg
3420
gccggcc
3427
```

```
<210> 6236
<211> 820
<212> PRT
<213> Homo sapiens
```

```
<400> 6236
Pro Arg Ala Pro Glu Pro Ala Ala Ala Val Gly Thr Met Trp Phe Phe
1               5                   10                  15
Ala Arg Asp Pro Val Arg Asp Phe Pro Phe Glu Leu Ile Pro Glu Pro
                20                  25                  30
Pro Glu Gly Gly Leu Pro Gly Pro Trp Ala Leu His Arg Gly Arg Lys
        35                  40                  45
Lys Ala Thr Gly Ser Pro Val Ser Ile Phe Val Tyr Asp Val Lys Pro
    50                  55                  60
Gly Ala Glu Glu Gln Thr Gln Val Ala Lys Ala Ala Phe Lys Arg Phe
65                  70                  75                  80
Lys Thr Leu Arg His Pro Asn Ile Leu Ala Tyr Ile Asp Gly Leu Glu
                85                  90                  95
Thr Glu Lys Cys Leu His Val Val Thr Gln Ala Val Thr Pro Leu Gly
                100                 105                 110
Ile Tyr Leu Lys Ala Arg Val Glu Ala Gly Gly Leu Lys Glu Leu Glu
        115                 120                 125
Ile Ser Trp Gly Leu His Gln Ile Val Lys Ala Leu Ser Phe Leu Val
    130                 135                 140
Asn Asp Cys Ser Leu Ile His Asn Asn Val Cys Met Ala Ala Val Phe
145                 150                 155                 160
Val Asp Arg Ala Gly Glu Trp Lys Leu Gly Gly Leu Asp Tyr Met Tyr
                165                 170                 175
Ser Ala Gln Gly Asn Gly Gly Gly Pro Pro Arg Lys Gly Ile Pro Glu
                180                 185                 190
Leu Glu Gln Tyr Asp Pro Pro Glu Leu Ala Asp Ser Ser Gly Arg Val
        195                 200                 205
Val Arg Glu Lys Trp Ser Ala Asp Met Trp Arg Leu Gly Cys Leu Ile
    210                 215                 220
Trp Glu Val Phe Asn Gly Pro Leu Pro Arg Ala Ala Ala Leu Arg Asn
```

```
225                    230                    235                    240
Pro Gly Lys Ile Pro Lys Thr Leu Val Pro His Tyr Cys Glu Leu Val
                           245                    250                    255
Gly Ala Asn Pro Lys Val Arg Pro Asn Pro Ala Arg Phe Leu Gln Asn
                   260                    265                    270
Cys Arg Ala Pro Gly Gly Phe Met Ser Asn Arg Phe Val Glu Thr Asn
           275                    280                    285
Leu Phe Leu Glu Glu Ile Gln Ile Lys Glu Pro Ala Glu Lys Gln Lys
       290                    295                    300
Phe Phe Gln Glu Leu Ser Lys Ser Leu Asp Ala Phe Pro Glu Asp Phe
305                    310                    315                    320
Cys Arg His Lys Val Leu Pro Gln Leu Leu Thr Ala Phe Glu Phe Gly
                   325                    330                    335
Asn Ala Gly Ala Val Val Leu Thr Pro Leu Phe Lys Val Gly Lys Phe
               340                    345                    350
Leu Ser Ala Glu Glu Tyr Gln Gln Lys Ile Ile Pro Val Val Val Lys
           355                    360                    365
Met Phe Ser Ser Thr Asp Arg Ala Met Arg Ile Arg Leu Leu Gln Gln
       370                    375                    380
Met Glu Gln Phe Ile Gln Tyr Leu Asp Glu Pro Thr Val Asn Thr Gln
385                    390                    395                    400
Ile Phe Pro His Val Val His Gly Phe Leu Asp Thr Asn Pro Ala Ile
                   405                    410                    415
Arg Glu Gln Thr Val Lys Ser Met Leu Leu Leu Ala Pro Lys Leu Asn
               420                    425                    430
Glu Ala Asn Leu Asn Val Glu Leu Met Lys His Phe Ala Arg Leu Gln
           435                    440                    445
Ala Lys Asp Glu Gln Gly Pro Ile Arg Cys Asn Thr Thr Val Cys Leu
       450                    455                    460
Gly Lys Ile Gly Ser Tyr Leu Ser Ala Ser Thr Arg His Arg Val Leu
465                    470                    475                    480
Thr Ser Ala Phe Ser Arg Ala Thr Arg Asp Pro Phe Ala Pro Ser Arg
                   485                    490                    495
Val Ala Gly Val Leu Gly Phe Ala Ala Thr His Asn Leu Tyr Ser Met
               500                    505                    510
Asn Asp Cys Ala Gln Lys Ile Leu Pro Val Leu Cys Gly Leu Thr Val
           515                    520                    525
Asp Pro Glu Lys Ser Val Arg Asp Gln Ala Phe Lys Ala Ile Arg Ser
       530                    535                    540
Phe Leu Ser Lys Leu Glu Ser Val Ser Glu Asp Pro Thr Gln Leu Glu
545                    550                    555                    560
Glu Val Glu Lys Asp Val His Ala Ala Ser Ser Pro Gly Met Gly Gly
                   565                    570                    575
Ala Ala Ala Ser Trp Ala Gly Trp Ala Val Thr Gly Val Ser Ser Leu
               580                    585                    590
Thr Ser Lys Leu Ile Arg Ser His Pro Thr Thr Ala Pro Thr Glu Thr
           595                    600                    605
Asn Ile Pro Gln Arg Pro Thr Pro Glu Gly Val Pro Ala Pro Ala Pro
       610                    615                    620
Thr Pro Val Pro Ala Thr Pro Thr Thr Ser Gly His Trp Glu Thr Gln
625                    630                    635                    640
Glu Glu Asp Lys Asp Thr Ala Glu Asp Ser Ser Thr Ala Asp Arg Trp
                   645                    650                    655
Asp Asp Glu Asp Trp Gly Ser Leu Glu Gln Glu Ala Glu Ser Val Leu
```

```
                660                   665                   670
Ala Gln Gln Asp Asp Trp Ser Thr Gly Gly Gln Val Ser Arg Ala Ser
           675                   680                   685
Gln Val Ser Asn Ser Asp His Lys Ser Ser Lys Ser Pro Glu Ser Asp
           690                   695                   700
Trp Ser Ser Trp Glu Ala Glu Gly Ser Trp Glu Gln Gly Trp Gln Glu
705                   710                   715                   720
Pro Ser Ser Gln Glu Pro Pro Pro Asp Gly Thr Arg Leu Ala Ser Glu
                725                   730                   735
Tyr Asn Trp Gly Gly Pro Glu Ser Ser Asp Lys Gly Asp Pro Phe Ala
                740                   745                   750
Thr Leu Ser Ala Arg Pro Ser Thr Gln Pro Arg Pro Asp Ser Trp Gly
           755                   760                   765
Glu Asp Asn Trp Glu Gly Leu Glu Thr Asp Ser Arg Gln Val Lys Ala
     770                   775                   780
Glu Leu Ala Arg Lys Lys Arg Glu Glu Arg Arg Arg Glu Met Glu Ala
785                   790                   795                   800
Lys Arg Ala Glu Arg Lys Val Ala Lys Gly Pro Met Lys Leu Gly Ala
                805                   810                   815
Arg Lys Leu Asp
                820
```

<210> 6237
<211> 494
<212> DNA
<213> Homo sapiens

<400> 6237
```
cggcctggga ccatgggcgg acatgttccc gatttgaggt gaaacatgaa gagaaaatag
60
aatacttaat aatgcttttc cgcaaccgct tcttgctgct gctggccctg gctgcgctgc
120
tggcctttgt gagcctcagc ctgcagttct tccacctgat cccggtgtcg actcctaaga
180
atggaatgag tagcaagagt cgaaagagaa tcatgcccga ccctgtgacg gagcccctg
240
tgacagaccc cgtttatgaa gctcttttgt actgcaacat ccccagcgtg gccgagcgca
300
gcatggaagg tcatgccccg catcattta agctggtctc agtgcatgtg ttcattcgcc
360
acggagacag gtacccactg tatgtcattc ccaaaacaaa gcgaccagaa attgactgca
420
ctctggtggc taacaggaaa ccgtatcacc caaaactgga agctttcatt agtcacatgt
480
tgagaggatc cgga
494
```

<210> 6238
<211> 141
<212> PRT
<213> Homo sapiens

<400> 6238
Met Leu Phe Arg Asn Arg Phe Leu Leu Leu Leu Ala Leu Ala Ala Leu

```
1                    5                    10                   15
Leu Ala Phe Val Ser Leu Ser Leu Gln Phe Phe His Leu Ile Pro Val
                20                   25                   30
Ser Thr Pro Lys Asn Gly Met Ser Ser Lys Ser Arg Lys Arg Ile Met
                35                   40                   45
Pro Asp Pro Val Thr Glu Pro Pro Val Thr Asp Pro Val Tyr Glu Ala
        50                   55                   60
Leu Leu Tyr Cys Asn Ile Pro Ser Val Ala Glu Arg Ser Met Glu Gly
65                   70                   75                   80
His Ala Pro His His Phe Lys Leu Val Ser Val His Val Phe Ile Arg
                85                   90                   95
His Gly Asp Arg Tyr Pro Leu Tyr Val Ile Pro Lys Thr Lys Arg Pro
                100                  105                  110
Glu Ile Asp Cys Thr Leu Val Ala Asn Arg Lys Pro Tyr His Pro Lys
        115                  120                  125
Leu Glu Ala Phe Ile Ser His Met Leu Arg Gly Ser Gly
        130                  135                  140
```

```
<210> 6239
<211> 911
<212> DNA
<213> Homo sapiens

<400> 6239
nnggcgggtt aaagagcgcg ttgctggctg ggcacgcgtg cttgagaagg ttcaatggcg
60
tggcagggac tagcggccga gttcctgcag gtgccggcgg tgacgcgggc ttacaccgca
120
gcctgtgtcc tcaccaccgc cgcggtgcag ctggagctcc tcagcccctt tcaactctac
180
ttcaacccgc accttgtgtt ccggaagttc caggtctgga ggctcgtcac caacttcctc
240
ttcttcgggc ccctgggatt cagcttcttc ttcaacatgc tcttcgtgtt ccgctactgc
300
cgcatgctgg aagagggctc cttccgcggc cgcacggccg acttcgtctt catgtttctc
360
ttcgggggcg tccttatgac cctgctggga ctcctgggca gctgttctt cctgggccag
420
gccctcatgg ccatgctggt gtacgtgtgg agccgccgca gccctcgggt gagggtcaac
480
ttcttcggcc tgctcacttt ccaggcaccg ttcctgcctt gggcgctcat gggcttctcg
540
ctgctgctgg gcaactccat cctcgtggac ctgctgggga ttgcggtggg ccatatctac
600
tacttcctgg aggacgtctt ccccaaccag cctggaggca gagggctcct gcagaccctt
660
ggcttcctaa agctgctcct ggatgcccct gcagaagacc ccaattacct gcccctccct
720
gaggaacagc caggacccca tctgccaccc ccgcagcagt gacccccacc cagggccagg
780
cctaagaggc ttctggcagc ttccatccta cccatgaccc ctacttgggg cagaaaaaac
840
ccatcctaaa ggctgggccc atgcaagggc ccacctgaat aaacagaatg agctgcaaaa
900
```

aaaaaaaaaa a
911

<210> 6240
<211> 235
<212> PRT
<213> Homo sapiens

<400> 6240
Met Ala Trp Gln Gly Leu Ala Ala Glu Phe Leu Gln Val Pro Ala Val
 1   5   10   15
Thr Arg Ala Tyr Thr Ala Ala Cys Val Leu Thr Thr Ala Ala Val Gln
            20   25   30
Leu Glu Leu Leu Ser Pro Phe Gln Leu Tyr Phe Asn Pro His Leu Val
        35   40   45
Phe Arg Lys Phe Gln Val Trp Arg Leu Val Thr Asn Phe Leu Phe Phe
    50   55   60
Gly Pro Leu Gly Phe Ser Phe Phe Phe Asn Met Leu Phe Val Phe Arg
65   70   75   80
Tyr Cys Arg Met Leu Glu Glu Gly Ser Phe Arg Gly Arg Thr Ala Asp
                85   90   95
Phe Val Phe Met Phe Leu Phe Gly Val Leu Met Thr Leu Leu Gly
            100   105   110
Leu Leu Gly Ser Leu Phe Phe Leu Gly Gln Ala Leu Met Ala Met Leu
        115   120   125
Val Tyr Val Trp Ser Arg Arg Ser Pro Arg Val Arg Val Asn Phe Phe
    130   135   140
Gly Leu Leu Thr Phe Gln Ala Pro Phe Leu Pro Trp Ala Leu Met Gly
145   150   155   160
Phe Ser Leu Leu Leu Gly Asn Ser Ile Leu Val Asp Leu Leu Gly Ile
                165   170   175
Ala Val Gly His Ile Tyr Tyr Phe Leu Glu Asp Val Phe Pro Asn Gln
                180   185   190
Pro Gly Gly Lys Arg Leu Leu Gln Thr Pro Gly Phe Leu Lys Leu Leu
                195   200   205
Leu Asp Ala Pro Ala Glu Asp Pro Asn Tyr Leu Pro Leu Pro Glu Glu
    210   215   220
Gln Pro Gly Pro His Leu Pro Pro Pro Gln Gln
225   230   235

<210> 6241
<211> 1515
<212> DNA
<213> Homo sapiens

<400> 6241
tgcggccgct gccttggacc cagcgccacc cgcacacggc gctccgctag ccaggccggg
60
agcaagagcc aggcggtgga gaagccgcg tcggagaagc cgcggctgag gcgctcgtcg
120
cgccgggccc caggaggagg gccgggggag ccgccgccgc ctgagctggc gttgctcccg
180
ccaccgccgc cgccgccgcc gactcccgcg accccgacgt cctcggcgtc caacctggac
240

```
ctgggcgagc agcgggacgc ctgggagacg ttccagaagc ggcagaagct tacctccgag
300
ggtgccgcca agctcctgct agacaccttt gaataccagg gcctggtgaa gcacacagga
360
ggctgccact gtggagcagt tcgtttgaa gtttgggcct cagcagactt gcatatattt
420
gactgcaatt gcagcatttg caagaagaag cagaatagac acttcattgt tccagcttct
480
cgcttcaagc tcctgaaggg agctgagcac ataacgactt cacgttcaa tactcacaaa
540
gcccagcata ccttctgtaa gagatgtggc gttcagagct ctatactcc acgatcaaac
600
cccggaggct tcggaattgc cccccactgc ctggatgagg gcactgtgcg gagtatggtc
660
actgaggaat tcaatggcag cgattgggag aaggccatga aagagcacaa gaccatcaag
720
aacatgtcta aagagtgagc ttctgcctct cctgccctga aaaggaggaa tgattggggc
780
cagcaacttt gctctccctg ccgtgcctcg gtggtgctcc tgaatgtggc tgacctgggc
840
tgctggttcc gttgactagg gtcatcttga tctctgcagt ttgctccagc taccagtttc
900
tttaggcagc tctttgtcct ccctctgccc agattttgat gtagtctaat tgacatcctt
960
ctcttcccaa cttttgtgtg atccagcaga gcatgtgaga ctctttgata tgcaccttca
1020
tgtattatct tgttcagttc tctgaggttg ggatcattat tatttcccat tttgcagatg
1080
agagaattga ggcagagaaa ggttcagcac cttgcctttg gttacacagc tggtcattct
1140
ggcttcaatc gcaggactac cagcctgtgc tcttcaccac ttagcttccc tgactcaggc
1200
cacttccctg gagcgttagc tggattctga gagtagtttc caagccagag ctttcagaga
1260
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1320
gtctcagatt tatcttccta cttcctactt ctccaaaaag actgagagct gacatatttg
1380
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1515


<210> 6242
<211> 245
<212> PRT
<213> Homo sapiens

<400> 6242
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Lys Pro Arg Leu Arg Arg Ser Ser Arg Arg Ala Pro Gly Gly Gly Pro
         35                40                45
Gly Glu Pro Pro Pro Pro Glu Leu Ala Leu Leu Pro Pro Pro Pro Pro
    50                55                60
Pro Pro Pro Thr Pro Ala Thr Pro Thr Ser Ser Ala Ser Asn Leu Asp
65                70                75                80
Leu Gly Glu Gln Arg Asp Ala Trp Glu Thr Phe Gln Lys Arg Gln Lys
              85                90                95
Leu Thr Ser Glu Gly Ala Ala Lys Leu Leu Leu Asp Thr Phe Glu Tyr
             100               105               110
Gln Gly Leu Val Lys His Thr Gly Cys His Cys Gly Ala Val Arg
        115               120               125
Phe Glu Val Trp Ala Ser Ala Asp Leu His Ile Phe Asp Cys Asn Cys
    130               135               140
Ser Ile Cys Lys Lys Lys Gln Asn Arg His Phe Ile Val Pro Ala Ser
145               150               155               160
Arg Phe Lys Leu Leu Lys Gly Ala Glu His Ile Thr Thr Tyr Thr Phe
              165               170               175
Asn Thr His Lys Ala Gln His Thr Phe Cys Lys Arg Cys Gly Val Gln
         180               185               190
Ser Phe Tyr Thr Pro Arg Ser Asn Pro Gly Gly Phe Gly Ile Ala Pro
    195               200               205
His Cys Leu Asp Glu Gly Thr Val Arg Ser Met Val Thr Glu Glu Phe
    210               215               220
Asn Gly Ser Asp Trp Glu Lys Ala Met Lys Glu His Lys Thr Ile Lys
225               230               235               240
Asn Met Ser Lys Glu
              245
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<210> 6243
<211> 326
<212> DNA
<213> Homo sapiens

<400> 6243
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120
tctgagacca gagggacaaa ccataatgag tgaagagatg aggacattct taaagtggag
180
ctagcaaagc tgggaatggc cttccacaag aggaaaccta agactggacc cagaatagta
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aaggtgggtt tggggacttg aggcaagtga gaaagctctg gaaatgccgc tggataaatt
300
ctgtagggat gcattcctgg agagtg
326

<210> 6244
<211> 104
<212> PRT
<213> Homo sapiens
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<400> 6244
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Met His Pro Tyr Arg Ile Tyr Pro Ala Ala Phe Pro Glu Leu Ser His
1               5                   10                  15
Leu Pro Gln Val Pro Lys Pro Thr Phe Thr Ile Leu Gly Pro Val Leu
        20                  25                  30
Gly Phe Leu Leu Trp Lys Ala Ile Pro Ser Phe Ala Ser Ser Thr Leu
        35                  40                  45
Arg Met Ser Ser Ser Leu His Ser Leu Trp Phe Val Pro Leu Val Ser
    50                  55                  60
Glu Glu Glu Val Leu Ile Ile Leu Ser Gly Ser Glu Cys Ser Thr Cys
65                  70                  75                  80
Pro Tyr Val Leu Ser Tyr Pro Thr Ser Ser Leu Thr Leu Phe His Gln
                85                  90                  95
Phe Leu Ser Phe Ser Pro Trp Arg
                100
```

<210> 6245
<211> 6609
<212> DNA
<213> Homo sapiens

<400> 6245
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120
tcttatcctg attgataagc ggactcccag tttttgcctt ctctttgccc cagaatttgg
180
agacctcggg cctctcccct gcttttctcc tctttcctag attttctcaa gtgtcccccgt
240
ttagtcttcc ctcctcagct tggctcctga gaacatttgc tgctgctttt gtttttgtag
300
gtgttggaca atcagataaa gaaagacctg gctgacaagg agacactgga gaacatgatg
360
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420
atcaatgcta tggattccaa gatcagatcc ctggaacaga ggattgtgga actgtctgaa
480
gccaataaac ttgcagcaaa tagcagtctt tttacccaaa ggaacatgaa ggcccaagaa
540
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780
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840
gcgaagcag agctggaaga gaccacagca gaagctgaag aggagatcca ggcactcacg
900
gcacatagag atgaaatcca gcgcaaattt gatgctcttc gtaacagctg tactgtaatc
960
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acagacctgg aggagcagct aaaccagctg accgaggaca acgctgaact caacaaccaa
1020
aacttctact tgtccaaaca actcgatgag gcttctggcg ccaacgacga gattgtacaa
1080
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1140
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1920
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2580
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gtatctattc atggtgccgt tggtgcttcc gaactcgcaa atacagccaa agcagatgtc
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4200
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6240
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6609
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<210> 6246
<211> 1286
<212> PRT
<213> Homo sapiens
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<400> 6246
Val Leu Asp Asn Gln Ile Lys Lys Asp Leu Ala Asp Lys Glu Thr Leu
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Glu Asn Met Met Gln Arg His Glu Glu Gln Ala His Glu Lys Gly Lys
            20                  25                  30
Ile Leu Ser Glu Gln Lys Ala Met Ile Asn Ala Met Asp Ser Lys Ile
        35                  40                  45
Arg Ser Leu Glu Gln Arg Ile Val Glu Leu Ser Glu Ala Asn Lys Leu
    50                  55                  60
Ala Ala Asn Ser Ser Leu Phe Thr Gln Arg Asn Met Lys Ala Gln Glu
65                  70                  75                  80
Glu Met Ile Ser Glu Leu Arg Gln Gln Lys Phe Tyr Leu Glu Thr Gln
            85                  90                  95
Ala Gly Lys Leu Glu Ala Gln Asn Arg Lys Leu Glu Glu Gln Leu Glu
            100                 105                 110
Lys Ile Ser His Gln Asp His Ser Asp Lys Asn Arg Leu Leu Glu Leu
        115                 120                 125
Glu Thr Arg Leu Arg Glu Val Ser Leu Glu His Glu Glu Gln Lys Leu
    130                 135                 140
Glu Leu Lys Arg Gln Leu Thr Glu Leu Gln Leu Ser Leu Gln Glu Arg
```

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145                    150                    155                    160
Glu Ser Gln Leu Thr Ala Leu Gln Ala Ala Arg Ala Ala Leu Glu Ser
                   165                    170                    175
Gln Leu Arg Gln Ala Lys Thr Glu Leu Glu Glu Thr Thr Ala Glu Ala
              180                    185                    190
Glu Glu Glu Ile Gln Ala Leu Thr Ala His Arg Asp Glu Ile Gln Arg
         195                    200                    205
Lys Phe Asp Ala Leu Arg Asn Ser Cys Thr Val Ile Thr Asp Leu Glu
    210                    215                    220
Glu Gln Leu Asn Gln Leu Thr Glu Asp Asn Ala Glu Leu Asn Asn Gln
225                    230                    235                    240
Asn Phe Tyr Leu Ser Lys Gln Leu Asp Glu Ala Ser Gly Ala Asn Asp
                   245                    250                    255
Glu Ile Val Gln Leu Arg Ser Glu Val Asp His Leu Arg Arg Glu Ile
              260                    265                    270
Thr Glu Arg Glu Met Gln Leu Thr Ser Gln Lys Gln Thr Met Glu Ala
         275                    280                    285
Leu Lys Thr Thr Cys Thr Met Leu Glu Glu Gln Val Met Asp Leu Glu
    290                    295                    300
Ala Leu Asn Asp Glu Leu Leu Glu Lys Glu Arg Gln Trp Glu Ala Trp
305                    310                    315                    320
Arg Ser Val Leu Gly Asp Glu Lys Ser Gln Phe Glu Cys Arg Val Arg
                   325                    330                    335
Glu Leu Gln Arg Met Leu Asp Thr Glu Lys Gln Ser Arg Ala Arg Ala
              340                    345                    350
Asp Gln Arg Ile Thr Glu Ser Arg Gln Val Val Glu Leu Ala Val Lys
         355                    360                    365
Glu His Lys Ala Glu Ile Leu Ala Leu Gln Gln Ala Leu Lys Glu Gln
    370                    375                    380
Lys Leu Lys Ala Glu Ser Leu Ser Asp Lys Leu Asn Asp Leu Glu Lys
385                    390                    395                    400
Lys His Ala Met Leu Glu Met Asn Ala Arg Ser Leu Gln Gln Lys Leu
                   405                    410                    415
Glu Thr Glu Arg Glu Leu Lys Gln Arg Leu Leu Glu Glu Gln Ala Lys
              420                    425                    430
Leu Gln Gln Gln Met Asp Leu Gln Lys Asn His Ile Phe Arg Leu Thr
         435                    440                    445
Gln Gly Leu Gln Glu Ala Leu Asp Arg Ala Asp Leu Leu Lys Thr Glu
    450                    455                    460
Arg Ser Asp Leu Glu Tyr Gln Leu Glu Asn Ile Gln Val Leu Tyr Ser
465                    470                    475                    480
His Glu Lys Val Lys Met Glu Gly Thr Ile Ser Gln Gln Thr Lys Leu
              485                    490                    495
Ile Asp Phe Leu Gln Ala Lys Met Asp Gln Pro Ala Lys Lys Lys Lys
         500                    505                    510
Val Pro Leu Gln Tyr Asn Glu Leu Lys Leu Ala Leu Glu Lys Glu Lys
    515                    520                    525
Ala Arg Cys Ala Glu Leu Glu Glu Ala Leu Gln Lys Thr Arg Ile Glu
530                    535                    540
Leu Arg Ser Ala Arg Glu Glu Ala Ala His Arg Lys Ala Thr Asp His
              550                    555                    560
Pro His Pro Ser Thr Pro Ala Thr Ala Arg Gln Gln Ile Ala Met Ser
              565                    570                    575
Ala Ile Val Arg Ser Pro Glu His Gln Pro Ser Ala Met Ser Leu Leu
```

```
              580                     585                     590
Ala Pro Pro Ser Ser Arg Arg Lys Glu Ser Ser Thr Pro Glu Glu Phe
         595                     600                     605
Ser Arg Arg Leu Lys Glu Arg Met His His Asn Ile Pro His Arg Phe
    610                     615                     620
Asn Val Gly Leu Asn Met Arg Ala Thr Lys Cys Ala Val Cys Leu Asp
625                     630                     635                     640
Thr Val His Phe Gly Arg Gln Ala Ser Lys Cys Leu Glu Cys Gln Val
                   645                     650                     655
Met Cys His Pro Lys Cys Ser Thr Cys Leu Pro Ala Thr Cys Gly Leu
              660                     665                     670
Pro Ala Glu Tyr Ala Thr His Phe Thr Glu Ala Phe Cys Arg Asp Lys
         675                     680                     685
Met Asn Ser Pro Gly Leu Gln Thr Lys Glu Pro Ser Ser Ser Leu His
    690                     695                     700
Leu Glu Gly Trp Met Lys Val Pro Arg Asn Asn Lys Arg Gly Gln Gln
705                     710                     715                     720
Gly Trp Asp Arg Lys Tyr Ile Val Leu Glu Gly Ser Lys Val Leu Ile
                   725                     730                     735
Tyr Asp Asn Glu Ala Arg Glu Ala Gly Gln Arg Pro Val Glu Glu Phe
              740                     745                     750
Glu Leu Cys Leu Pro Asp Gly Asp Val Ser Ile His Gly Ala Val Gly
         755                     760                     765
Ala Ser Glu Leu Ala Asn Thr Ala Lys Ala Asp Val Pro Tyr Ile Leu
    770                     775                     780
Lys Met Glu Ser His Pro His Thr Thr Cys Trp Pro Gly Arg Thr Leu
785                     790                     795                     800
Tyr Leu Leu Ala Pro Ser Phe Pro Asp Ser Gln Arg Trp Val Thr Ala
                   805                     810                     815
Leu Glu Ser Val Val Ala Gly Gly Arg Val Ser Arg Glu Lys Ala Glu
              820                     825                     830
Ala Asp Ala Lys Leu Leu Gly Asn Ser Leu Leu Lys Leu Glu Gly Asp
         835                     840                     845
Asp Arg Leu Asp Met Asn Cys Thr Leu Pro Phe Ser Asp Gln Val Val
    850                     855                     860
Leu Val Gly Thr Glu Glu Gly Leu Tyr Ala Leu Asn Val Leu Lys Asn
865                     870                     875                     880
Ser Leu Thr His Val Pro Gly Ile Gly Ala Val Phe Gln Ile Tyr Ile
                   885                     890                     895
Ile Lys Asp Leu Glu Lys Leu Leu Met Ile Ala Gly Glu Glu Arg Ala
         900                     905                     910
Leu Cys Leu Val Asp Val Lys Lys Val Lys Gln Ser Leu Ala Gln Ser
    915                     920                     925
His Leu Pro Ala Gln Pro Asp Ile Ser Pro Asn Ile Phe Glu Ala Val
930                     935                     940
Lys Gly Cys His Leu Phe Gly Ala Gly Lys Ile Glu Asn Gly Leu Cys
945                     950                     955                     960
Ile Cys Ala Ala Met Pro Ser Lys Val Val Ile Leu Arg Tyr Asn Glu
                   965                     970                     975
Asn Leu Ser Lys Tyr Cys Ile Arg Lys Glu Ile Glu Thr Ser Glu Pro
         980                     985                     990
Cys Ser Cys Ile His Phe Thr Asn Tyr Ser Ile Leu Ile Gly Thr Asn
    995                     1000                    1005
Lys Phe Tyr Glu Ile Asp Met Lys Gln Tyr Thr Leu Glu Glu Phe Leu
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         1010                  1015                    1020
Asp Lys Asn Asp His Ser Leu Ala Pro Ala Val Phe Ala Ala Ser Ser
1025                  1030                    1035                1040
Asn Ser Phe Pro Val Ser Ile Val Gln Val Asn Ser Ala Gly Gln Arg
                 1045                   1050                 1055
Glu Glu Tyr Leu Leu Cys Phe His Glu Phe Gly Val Phe Val Asp Ser
         1060                   1065                    1070
Tyr Gly Arg Arg Ser Arg Thr Asp Asp Leu Lys Trp Ser Arg Leu Pro
         1075                  1080                    1085
Leu Ala Phe Ala Tyr Arg Glu Pro Tyr Leu Phe Val Thr His Phe Asn
         1090                  1095                    1100
Ser Leu Glu Val Ile Glu Ile Gln Ala Arg Ser Ser Ala Gly Thr Pro
1105                  1110                    1115                1120
Ala Arg Ala Tyr Leu Asp Ile Pro Asn Pro Arg Tyr Leu Gly Pro Ala
                 1125                   1130                 1135
Ile Ser Ser Gly Ala Ile Tyr Leu Ala Ser Ser Tyr Gln Asp Lys Leu
         1140                   1145                    1150
Arg Val Ile Cys Cys Lys Gly Asn Leu Val Lys Glu Ser Gly Thr Glu
         1155                  1160                    1165
His His Arg Gly Pro Ser Thr Ser Arg Ser Ser Pro Asn Lys Arg Gly
         1170                  1175                    1180
Pro Pro Thr Tyr Asn Glu His Ile Thr Lys Arg Val Ala Ser Ser Pro
1185                  1190                    1195                1200
Ala Pro Pro Glu Gly Pro Ser His Pro Arg Glu Pro Ser Thr Pro His
                 1205                   1210                 1215
Arg Tyr Arg Glu Gly Arg Thr Glu Leu Arg Arg Asp Lys Ser Pro Gly
         1220                  1225                    1230
Arg Pro Leu Glu Arg Glu Lys Ser Pro Gly Arg Met Leu Ser Thr Arg
         1235                  1240                    1245
Arg Glu Arg Ser Pro Gly Arg Leu Phe Glu Asp Ser Ser Arg Gly Arg
1250                  1255                    1260
Leu Pro Ala Gly Ala Val Arg Thr Pro Leu Ser Gln Val Asn Lys Val
1265                  1270                    1275                1280
Trp Asp Gln Ser Ser Val
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<211> 497
<212> DNA
<213> Homo sapiens

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tagaagtgct ggagagggcc aagaggaggg cggtggactg gcatgccctg gagcgtccca
120
aaggctgcat gggggtcctt gcccgggagg cgccccacct agagaaacag ccggcagccg
180
gcccgcagcg cgttctcccg ggagagaaat attattcatc tgtgccagag gaaggagggg
240
caacccatgt ctatcgttat cacagaggcg agtcgaagct gcacatgtgc ttggacatag
300
ggaatggtca gagaaaagac agaaaaaaga catcccttgg tcctggaggc agctatcaaa
360
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tatcagagca tgctccagag gcatcccagc ctgtgagtac ggaactgctt acgcactggg
420
tttcaccacc gttgcaactc catgaaccag ttgacatggt tcttagaggg ctatttgaat
480
tgagtctata gtatttt
497

<210> 6248
<211> 142
<212> PRT
<213> Homo sapiens

<400> 6248
Met Gly Trp Thr Asp Val Pro Cys Ser Val His Lys Ala Gly Ser Arg
1   5   10   15
Ser Ala Gly Glu Gly Gln Glu Glu Gly Gly Gly Leu Ala Cys Pro Gly
            20   25   30
Ala Ser Gln Arg Leu His Gly Gly Pro Cys Pro Gly Gly Ala Pro Pro
        35   40   45
Arg Glu Thr Ala Gly Ser Arg Pro Ala Ala Arg Ser Pro Gly Arg Glu
    50   55   60
Ile Leu Phe Ile Cys Ala Arg Gly Arg Arg Gly Asn Pro Cys Leu Ser
65   70   75   80
Leu Ser Gln Arg Arg Val Glu Ala Ala His Val Leu Gly His Arg Glu
                85   90   95
Trp Ser Glu Lys Arg Gln Lys Lys Asp Ile Pro Trp Ser Trp Arg Gln
            100   105   110
Leu Ser Glu Asn Ile Arg Ala Cys Ser Arg Gly Ile Pro Ala Cys Glu Tyr
        115   120   125
Gly Thr Ala Tyr Ala Leu Gly Phe Thr Thr Val Ala Thr Pro
    130   135   140

<210> 6249
<211> 1217
<212> DNA
<213> Homo sapiens

<400> 6249
nntgagcaac aaaccgagtt ctggagaacg ccatcagctc gctgcttaaa ctggaaacaa
60
aagtctcaac ttccaacctc tttgcagcta ggagtggcca agtagcatag atctggtgaa
120
tgaactgcag gtgggaattt ctgagaaggt ttccttctta aatagaaaga ttaaaccaca
180
ggttccatta tgggtcgact tgatgggaaa gtcatcatcc tgacggccgc tgctcagggg
240
attggccaag cagctgcctt agcttttgca agagaaggtg ccaaagtcat agccacagac
300
attaatgagt ccaaacttca ggaactggaa aagtacccgg gtattcaaac tcgtgtcctt
360
gatgtcacaa agaagaaaca aattgatcag tttgccaatg aagttgagag acttgatgtt
420
ctctttaatg ttgctggtttt tgtccatcat ggaactgtcc tggattgtga ggagaaagac
480

```
tgggacttct cgatgaatct caatgtgcgc agcatgtacc tgatgatcaa ggcattcctt
540
cctaaaatgc ttgctcagaa atctggcaat attatcaaca tgtcttctgt ggcttccagc
600
gtcaaaggag ttgtgaacag atgtgtgtac agcacaacca aggcagccgt gattggcctc
660
acaaaatctg tggctgcaga tttcatccag cagggcatca ggtgcaactg tgtgtgccca
720
ggaacagttg atacgccatc tctacaagaa agaatacaag ccagaggaaa tcctgaagag
780
gcacggaatg atttcctgaa gagacaaaag acgggaagat tcgcaactgc agaagaaata
840
gccatgctct gcgtgtattt ggcttctgat gaatctgctt atgtaactgg taaccctgtc
900
atcattgatg gaggctggag cttgtgattt taggatctcc atggtgggaa ggaaggcagg
960
ccccttcctat ccacagtgaa cctggttacg aagaaaactc accaatcatc tccttcctgt
1020
taatcacatg ttaatgaaaa taagctcttt ttaatgatgt cactgtttgc aagagtctga
1080
ttctttaagt atattaatct ctttgtaatc tcttctgaaa tcattgtaaa gaaataaaaa
1140
tattgaactc atagcaggag aatagtttt aaaataaatc tcgatttgtt agcaaaaaaa
1200
aaaaaaaaaa aaaaaaa
1217


<210> 6250
<211> 245
<212> PRT
<213> Homo sapiens


<400> 6250
Met Gly Arg Leu Asp Gly Lys Val Ile Ile Leu Thr Ala Ala Ala Gln
1               5                   10                  15
Gly Ile Gly Gln Ala Ala Ala Leu Ala Phe Ala Arg Glu Gly Ala Lys
                20                  25                  30
Val Ile Ala Thr Asp Ile Asn Glu Ser Lys Leu Gln Glu Leu Glu Lys
            35                  40                  45
Tyr Pro Gly Ile Gln Thr Arg Val Leu Asp Val Thr Lys Lys Lys Gln
        50                  55                  60
Ile Asp Gln Phe Ala Asn Glu Val Glu Arg Leu Asp Val Leu Phe Asn
65                  70                  75                  80
Val Ala Gly Phe Val His His Gly Thr Val Leu Asp Cys Glu Glu Lys
                85                  90                  95
Asp Trp Asp Phe Ser Met Asn Leu Asn Val Arg Ser Met Tyr Leu Met
                100                 105                 110
Ile Lys Ala Phe Leu Pro Lys Met Leu Ala Gln Lys Ser Gly Asn Ile
            115                 120     .           125
Ile Asn Met Ser Ser Val Ala Ser Ser Val Lys Gly Val Val Asn Arg
        130                 135                 140
Cys Val Tyr Ser Thr Thr Lys Ala Ala Val Ile Gly Leu Thr Lys Ser
145                 150                 155                 160
Val Ala Ala Asp Phe Ile Gln Gln Gly Ile Arg Cys Asn Cys Val Cys
```

```
                   165                 170                 175
Pro Gly Thr Val Asp Thr Pro Ser Leu Gln Glu Arg Ile Gln Ala Arg
               180                 185                 190
Gly Asn Pro Glu Glu Ala Arg Asn Asp Phe Leu Lys Arg Gln Lys Thr
           195                 200                 205
Gly Arg Phe Ala Thr Ala Glu Glu Ile Ala Met Leu Cys Val Tyr Leu
       210                 215                 220
Ala Ser Asp Glu Ser Ala Tyr Val Thr Gly Asn Pro Val Ile Ile Asp
225                 230                 235                 240
Gly Gly Trp Ser Leu
                245
```

<210> 6251
<211> 1611
<212> DNA
<213> Homo sapiens

<400> 6251
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tttttttttt tttttttttt tttttttttt tttttttttt ttttccagat caggaagttt
60
tattgctgac atgcaggaag agtccccatg tagtacaaaa atatgtcttt atacaaactt
120
ttttgtgact ttttccgttt ctttacaata ggacttctct cagtgtgtga cacccagtga
180
gggctgaccc atcctcctct cctttgcttc accaggaatg tcatcagaca catggcttga
240
ccttggaagg gcccagtctg tctgacaggg ctttgcagac ccggcggcta ttgctttgaa
300
aaggaggaga aagaccacgc acgggcagca gcctggaggg acccggtggg ctgctgagag
360
ggggctccgc tgcgacgggc cctggccccg cttcaggccc tcacaggagg acagtcaagg
420
gctgggagcc ctaggccgga ctgcatttcc gctcccgcag gagactttct atgaaataaa
480
tatagaaaag agggcatccc ccagccccac agcacaagac cctggccctc agcgctggac
540
agctgagaca gacgcaggct cgctgctcag ggggagtaag tgctgggctc cagtaggctc
600
ccacaggccc actgaggcag aggcatgagt cgcccaagtg ctggatgggg catggggaga
660
aaggggcgtg ggcagccctg ctactgctgg caagaggtgg ccccattttt tccagatggg
720
gaaactgagg cacaaggagg tttgggaact tgcccaaggt cactcacagt gagtcagctt
780
tttagggggga ggagagcggc tcacactctg ggaaacacag tcacctcccc actggggagc
840
agggcaggc aggaggggcc tcagggccca tgactgcctg gaggggacac tcagcctctc
900
tgaggacata tggggggtag gcctctgggg aagggtcttt gcttggcatc aggcagggcc
960
aagtccagta agggcaaggg gaggggggcat tctggtgaga acagcatttc tggcaagacg
1020
ggcatccact tcaaaatctc ggctcaaaag ggcagcaggg ctgttctcaa gccaggcagg
1080
```

caggttcccc caatccctac aattctcctg agtccctcac caccatggag gaccctgct
1140

agggtctacc gggagagtca ccacatctat tatgaggcaa gggcactggg atatgttccc
1200

accatcccct aaacacaaga gtaggctagg ggagcgtgca ggcagccccc gctcacggcc
1260

aggcctgcag cccaacccat gggcccttc gcactgggag tccacgtgag ctcagtacca
1320

cggggaagga tagagaaggg aacaggttaa cgcgcgtgta cagcacctca gagaagccac
1380

tgagacggga gagaaagagc caggtctaga aaggcctccc atcaccggca gcagagaggg
1440

actggtgggc tgaaagggga cagggactgg caggagggc ttccctgcct gggggtgagg
1500

agggagctca cgtgtgggct gtggattcct tgctgtccag ccaggctggg ggcagggagt
1560

ggccatggac tgagccacct agagatggga gagaagttgg tatgggtaan a
1611

<210> 6252
<211> 100
<212> PRT
<213> Homo sapiens

<400> 6252
Met Gly Gly Arg Pro Leu Gly Lys Gly Leu Cys Leu Ala Ser Gly Arg
1   5   10   15
Ala Lys Ser Ser Lys Gly Lys Gly Arg Gly His Ser Gly Glu Asn Ser
            20   25   30
Ile Ser Gly Lys Thr Gly Ile His Phe Lys Ile Ser Ala Gln Lys Gly
        35   40   45
Ser Arg Ala Val Leu Lys Pro Gly Arg Gln Gly Pro Pro Ile Pro Thr
    50   55   60
Ile Leu Leu Ser Pro Ser Pro Trp Arg Thr Leu Ala Arg Val Tyr
65   70   75   80
Arg Glu Ser His His Ile Tyr Tyr Glu Arg Ala Leu Gly Tyr Val
                85   90   95
Pro Thr Ile Pro
                100

<210> 6253
<211> 1953
<212> DNA
<213> Homo sapiens

<400> 6253
nngtggggta gcgggcaagg cgggcgccga gtttgcaaag gctcgcagcg gccagaaacc
60

cggctccgag cggcggcggc ccggcttccg ctgcccgtga gctaaggacg gtccgctccc
120

tctagccagc tccgaatcct gatccaggcg ggggccaggg gcccctcgcc tcccctctga
180

ggaccgaaga tgagcttcct cttcagcagc cgctcttcta aaacattcaa accaaagaag
240

```
aatatccctg aaggatctca tcagtatgaa ctcttaaaac atgcagaagc aactctagga
300
agtgggaatc tgagacaagc tgttatgttg cctgagggag aggatctcaa tgaatggatt
360
gctgtgaaca ctgtggattt ctttaaccag atcaacatgt tatatggaac tattacagaa
420
ttctgcactg aagcaagctg tccagtcatg tctgcaggtc cgagatatga atatcactgg
480
gcagatggta ctaatattaa aaagccaatc aaatgttctg caccaaaata cattgactat
540
ttgatgactt gggttcaaga tcagcttgat gatgaaactc ttttttccttc taagattggt
600
gtcccatttc ccaaaaactt tatgtctgtg gcaaagacta ttctaaagcg tctgttcagg
660
gtttatgccc atatttatca ccagcacttt gattctgtga tgcagctgca agaggaggcc
720
cacctcaaca cctcctttaa gcactttatt ttctttgttc aggagtttaa tctgattgat
780
aggcgtgagc tggcacctct tcaagaatta atagagaaac ttggatcaaa agacagataa
840
atgtttcttc tagaacacag ttaccccctt gcttcatcta ttgctagaac tatctcattg
900
ctatctgtta tagactagtg atacaaactt taagaaaaca ggataaaaag atacccattg
960
cctgtgtcta ctgataaaat tatcccaaag gtaggttggt gtgatagttt ccgagtaaga
1020
ccttaaggac acagccaaat cttaagtact gtgtgaccac tcttgttgtt atcacatagt
1080
catacttggt tgtaatatgt gatggttaac ctgtagctta taaatttact tattattctt
1140
ttactcattt actccagtcat ttctttacaa gaaaatgatt gaatctgttt taggtgacag
1200
cacaatggac attaagaatt tccatcaata atttatgaat aagtttccag aacaaatttc
1260
ctaataacac aatcagattg gttttattct tttattttac gaataaaaaa tgtatttttc
1320
agtaccttg agatttagaa catctgtgtc acttcagata acattttagt ttcaagtttg
1380
tatggtagtg tttttataga taagatacgt ctatttttc aaaattcatg attgcagttt
1440
aaatcatcat atgacgtgtg ggtgggagca accaaagtta tttttacagg gactttattt
1500
tttgatcttt atttgagatt gtttttcatat ctatctaaat tattggagt gtgtgtatca
1560
gaagtaattt tttaatgtct tctaaggatg gtcttccagg cttttaaact gaaaagctta
1620
attcagatag tagctttgg ctgagaaaag gaatccaaaa tattaataaa tttagatctc
1680
aaaaccacta tttttattat ttcattattt ttcagaggcc ttaaaattct gggtaagaga
1740
atggaggaaa atatccagag tacttgatta ttttatttcc ttttattaaa aaattacttc
1800
tatgtttta ttgtctcttg agccttagtt aagagtagtg tagaaatgca tgaacttcat
1860
```

```
cctaataagg ataaaactta aggaaaacca caataaacca tgaaggtgta cacatcttaa
1920
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaa
1953
```

```
<210> 6254
<211> 216
<212> PRT
<213> Homo sapiens
```

```
<400> 6254
Met Ser Phe Leu Phe Ser Ser Arg Ser Ser Lys Thr Phe Lys Pro Lys
1               5                   10                  15
Lys Asn Ile Pro Glu Gly Ser His Gln Tyr Glu Leu Leu Lys His Ala
            20                  25                  30
Glu Ala Thr Leu Gly Ser Gly Asn Leu Arg Gln Ala Val Met Leu Pro
        35                  40                  45
Glu Gly Glu Asp Leu Asn Glu Trp Ile Ala Val Asn Thr Val Asp Phe
    50                  55                  60
Phe Asn Gln Ile Asn Met Leu Tyr Gly Thr Ile Thr Glu Phe Cys Thr
65                  70                  75                  80
Glu Ala Ser Cys Pro Val Met Ser Ala Gly Pro Arg Tyr Glu Tyr His
            85                  90                  95
Trp Ala Asp Gly Thr Asn Ile Lys Lys Pro Ile Lys Cys Ser Ala Pro
            100                 105                 110
Lys Tyr Ile Asp Tyr Leu Met Thr Trp Val Gln Asp Gln Leu Asp Asp
        115                 120                 125
Glu Thr Leu Phe Pro Ser Lys Ile Gly Val Pro Phe Pro Lys Asn Phe
    130                 135                 140
Met Ser Val Ala Lys Thr Ile Leu Lys Arg Leu Phe Arg Val Tyr Ala
145                 150                 155                 160
His Ile Tyr His Gln His Phe Asp Ser Val Met Gln Leu Gln Glu Glu
            165                 170                 175
Ala His Leu Asn Thr Ser Phe Lys His Phe Ile Phe Phe Val Gln Glu
        180                 185                 190
Phe Asn Leu Ile Asp Arg Arg Glu Leu Ala Pro Leu Gln Glu Leu Ile
        195                 200                 205
Glu Lys Leu Gly Ser Lys Asp Arg
    210                 215
```

```
<210> 6255
<211> 622
<212> DNA
<213> Homo sapiens
```

```
<400> 6255
nntccggagg ctgagacagg agaatcgctt gaacccagga ggccgaggtt gcagtgagcc
60
gagatcatgc cattgcactc cagcctgggc aacagagtga gacttcatct caaaaaaaaa
120
aaagccacag tggctgcctt cacagccagc gagggccacg cacatcccag ggtagtggag
180
ctacccaaga cggatgaggg cctaggcttc aacatcatgg gtggcaaaga gcaaaactcg
240
```

```
cccatctaca tctcccgggt catcccaggg ggtgtggctg accgccatgg aggcctcaag
300
cgtggggatc aactgttgtc ggtgaacggt gtgagcgttg agggtgagca gcatgagaag
360
gcggtggagc tgctgaaggc ggcccagggc tcggtgaagc tggttgtccg ttacacaccg
420
cgagtgctgg aggagatgga ggcccggttc gagaagatgc gctctgcccg ccggcgccaa
480
cagcatcaga gctactcgtc cttggagtct cgaggttgaa accacagatc tggacgttca
540
cgtgcactct cttcctgtac agtatttatt gttcctggca ctttatttaa agattttttga
600
ccctcaaaaa aaaaaaaaaa aa
622
```

```
<210> 6256
<211> 150
<212> PRT
<213> Homo sapiens
```

```
<400> 6256
Met Pro Leu His Ser Ser Leu Gly Asn Arg Val Arg Leu His Leu Lys
 1               5                   10                  15
Lys Lys Lys Ala Thr Val Ala Ala Phe Thr Ala Ser Glu Gly His Ala
            20                  25                  30
His Pro Arg Val Val Glu Leu Pro Lys Thr Asp Glu Gly Leu Gly Phe
        35                  40                  45
Asn Ile Met Gly Gly Lys Glu Gln Asn Ser Pro Ile Tyr Ile Ser Arg
    50                  55                  60
Val Ile Pro Gly Gly Val Ala Asp Arg His Gly Gly Leu Lys Arg Gly
65                  70                  75                  80
Asp Gln Leu Leu Ser Val Asn Gly Val Ser Val Glu Gly Glu Gln His
                85                  90                  95
Glu Lys Ala Val Glu Leu Leu Lys Ala Ala Gln Gly Ser Val Lys Leu
            100                 105                 110
Val Val Arg Tyr Thr Pro Arg Val Leu Glu Glu Met Glu Ala Arg Phe
        115                 120                 125
Glu Lys Met Arg Ser Ala Arg Arg Gln Gln His Gln Ser Tyr Ser
    130                 135                 140
Ser Leu Glu Ser Arg Gly
145                 150
```

```
<210> 6257
<211> 2216
<212> DNA
<213> Homo sapiens
```

```
<400> 6257
nttttttttt ttttttttt tttttttgctc agcaatcttt attcagttct tcttgggggt
60
gggatgcctc ccttcccatg ctcccacccc tcccatccca gaactccgtt gggctcagtg
120
tcctctgttg agggaaggtc ttggtgccca gatgcctact ctgcaggaga gggaggaacc
180
```

```
ttgtcccttt gcgggagtcg ctggtctctt ctgttgtggg gaagaaggaa ggtgggaggg
240
gcactgtcca ccagcactca gagctccatt atgtccccag ctggggttgc agggtagggg
300
ggactggggg tgtcccccag cctcagcaga cggagggcct cagggatgag gctgccagga
360
tagcgccaga gaagcagctc agagcaaggg ctcctgagtg ggggcagggc tggggagaag
420
gtcatggggg ggctgcagta ggggtggtca ttgtgcaggc tgagttgaga gaagtgggtg
480
gccatgttct cctcagacag aaactgcttg cgcagaggct cctgctcctc ctccaggcgc
540
cgcttggtgc tcatgggcac agctcctcgg agaggggagc tggcgtccag gccccaagtc
600
accccaagg cggcccgcgg gaggcgctgg gccctccct gggggcctcg ctgcaaggge
660
tgctgcagga tcattgggtt ttggggtcct gcgggtggga tctgggcgac aggggaggag
720
tctctgaggg cgtggccaag agaggatggg cgtggcttta ggcgggcaca gccgcgaggt
780
tctgcgcggg cgcggaagac gggcggcgcg tggcggaagg caggcttgct cctcggggcg
840
ggggagggta tccggcttaa ggggggctgcg gtgacacca cttcttaatg tcggggggtct
900
tcgcggcgct cacctcggct cctagggttc gggacgggtac gcaccagcca ccttcgcgcc
960
gaaggcggta gggcgccacg gagaggaacc gctctaggca cgtaaggcct cgtgaggttg
1020
cgtcgcgcgc ggagcgactct gggacttgta gttctgggaga tggagcgagc tgtgccgctc
1080
gcggtgcctc tgggtcagac agaggtgttc caggccttgc agcggctcca tatgaccatc
1140
ttctcccaga gcgtctcacc atgtgggaag tttctggcgg ctggcaacaa ttacgggcag
1200
attgccatct tcagcttgtc ctctgctttg agctcagaag ccaaagagga aagtaagaag
1260
ccggtggtga ctttccaagc ccatgatggg cccgtctata gcatggtttc caccgatcga
1320
catctgctta gtgctgggga tggggaggtg aaggcctggc tttgggcgga gatgctcaag
1380
aagggctgta aggagctgtg gcgtcgtcag cctccataca ggaccagcct ggaagtgcct
1440
gagatcaacg ctttgctgct ggtccccaag gagaattccc tcatcctggc tgggggagac
1500
tgtcagttgc acactatgga ccttgaaact gggactttca cgagggtcct ccggggccac
1560
acagactaca tccactgcct ggcactgcgg gaaaggagcc cagaggtgct gtcaggtggc
1620
gaggatggag ctgttcgact ttgggacctg cgcacagcca aggaggtcca gacgatcgag
1680
tctataagca cgaggagtgc tcgaggcccc acaatgggcg ctggattgga tgtttggact
1740
gattccgact ggatggtctg tggaggggggc ccagccctca ccctctggca cctccgatcc
1800
```

```
tccacaccca ccaccatctt ccccatccgg gcgccacaga agcacgtcac cttctaccag
1860
gacctgattc tgtcagctgg ccagggccgc tgcgtcaacc agtggcagct gagcgggag
1920
ctgaaggccc aggtgcctgg ctcctcccca gggctgctca gcctcagcct caaccagcag
1980
cctgccgcgc ctgagtgcaa ggtcctgaca gctgcaggca acagctgccg ggtggatgtc
2040
ttcaccaacc tgggttaccg agccttctcc ctgtccttct gatctctgac gacaccccca
2100
gccagctcag ggttttagag tgttttttcat tttctttttt tttttttttt tacaataaag
2160
tttcaggctt tttaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaa
2216


<210> 6258
<211> 340
<212> PRT
<213> Homo sapiens

<400> 6258
Met Glu Arg Ala Val Pro Leu Ala Val Pro Leu Gly Gln Thr Glu Val
1               5                   10                  15
Phe Gln Ala Leu Gln Arg Leu His Met Thr Ile Phe Ser Gln Ser Val
            20                  25                  30
Ser Pro Cys Gly Lys Phe Leu Ala Ala Gly Asn Asn Tyr Gly Gln Ile
        35                  40                  45
Ala Ile Phe Ser Leu Ser Ser Ala Leu Ser Ser Glu Ala Lys Glu Glu
    50                  55                  60
Ser Lys Lys Pro Val Val Thr Phe Gln Ala His Asp Gly Pro Val Tyr
65                  70                  75                  80
Ser Met Val Ser Thr Asp Arg His Leu Leu Ser Ala Gly Asp Gly Glu
                85                  90                  95
Val Lys Ala Trp Leu Trp Ala Glu Met Leu Lys Lys Gly Cys Lys Glu
            100                 105                 110
Leu Trp Arg Arg Gln Pro Pro Tyr Arg Thr Ser Leu Glu Val Pro Glu
        115                 120                 125
Ile Asn Ala Leu Leu Leu Val Pro Lys Glu Asn Ser Leu Ile Leu Ala
    130                 135                 140
Gly Gly Asp Cys Gln Leu His Thr Met Asp Leu Glu Leu Thr Gly Thr Phe
145                 150                 155                 160
Thr Arg Val Leu Arg Gly His Thr Asp Tyr Ile His Cys Leu Ala Leu
                165                 170                 175
Arg Glu Arg Ser Pro Glu Val Leu Ser Gly Gly Glu Asp Gly Ala Val
            180                 185                 190
Arg Leu Trp Asp Leu Arg Thr Ala Lys Glu Val Gln Thr Ile Glu Ser
        195                 200                 205
Ile Ser Thr Arg Ser Ala Arg Gly Pro Thr Met Gly Ala Gly Leu Asp
    210                 215                 220
Val Trp Thr Asp Ser Asp Trp Met Val Cys Gly Gly Gly Pro Ala Leu
225                 230                 235                 240
Thr Leu Trp His Leu Arg Ser Ser Thr Pro Thr Thr Ile Phe Pro Ile
                245                 250                 255
Arg Ala Pro Gln Lys His Val Thr Phe Tyr Gln Asp Leu Ile Leu Ser
```

```
            260                 265                 270
Ala Gly Gln Gly Arg Cys Val Asn Gln Trp Gln Leu Ser Gly Glu Leu
       275                 280                 285
Lys Ala Gln Val Pro Gly Ser Ser Pro Gly Leu Leu Ser Leu Ser Leu
       290                 295                 300
Asn Gln Gln Pro Ala Ala Pro Glu Cys Lys Val Leu Thr Ala Ala Gly
305                 310                 315                 320
Asn Ser Cys Arg Val Asp Val Phe Thr Asn Leu Gly Tyr Arg Ala Phe
               325                 330                 335
Ser Leu Ser Phe
            340


<210> 6259
<211> 384
<212> DNA
<213> Homo sapiens

<400> 6259
ccatgcagcg atcccataga acacagctca gagtctgata acagtgtcct tgaaattcca
60
gatgctttcg atagaacaga gaacatgtta tctatgcaga aaaatgaaaa gataaagtat
120
tctaggtttg ctgccacaaa cactagggta aaagcaaaac agaagcctct cattagtaac
180
tcacatacag accacttaat gggttgtact aagagtgcag agcctggaac cgagacgtct
240
caggttaatt ccttctctga tctgaaggca tctactcttg ttcacaaacc ccagtcagat
300
tttacaaatg atgctctctc tccaaaattc aacctgtcat caagcatatc cagtgagaac
360
tcgttaataa agggtggggc agca
384


<210> 6260
<211> 128
<212> PRT
<213> Homo sapiens

<400> 6260
Pro Cys Ser Asp Pro Ile Glu His Ser Ser Glu Ser Asp Asn Ser Val
  1                 5                  10                 15
Leu Glu Ile Pro Asp Ala Phe Asp Arg Thr Glu Asn Met Leu Ser Met
               20                 25                 30
Gln Lys Asn Glu Lys Ile Lys Tyr Ser Arg Phe Ala Ala Thr Asn Thr
       35                 40                 45
Arg Val Lys Ala Lys Gln Lys Pro Leu Ile Ser Asn Ser His Thr Asp
 50                 55                 60
His Leu Met Gly Cys Thr Lys Ser Ala Glu Pro Gly Thr Glu Thr Ser
65                 70                 75                 80
Gln Val Asn Ser Phe Ser Asp Leu Lys Ala Ser Thr Leu Val His Lys
               85                 90                 95
Pro Gln Ser Asp Phe Thr Asn Asp Ala Leu Ser Pro Lys Phe Asn Leu
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Ser Ser Ser Ile Ser Ser Glu Asn Ser Leu Ile Lys Gly Gly Ala Ala
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                115   120   125

<210> 6261
<211> 3619
<212> DNA
<213> Homo sapiens

<400> 6261
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300
gagctgggag cgacgctcat gggcccgcag tttggctggg atcactcgct tcacaaaagg
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480
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1200
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1260
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1380

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2820
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3000
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3180
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3600
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3619


<210> 6262
<211> 431
<212> PRT
<213> Homo sapiens

<400> 6262
Met Gly Pro Gln Phe Gly Trp Asp His Ser Leu His Lys Arg Lys Arg
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Leu Pro Pro Val Lys Arg Ser Leu Val Tyr Tyr Leu Lys Asn Arg Glu
            20                  25                  30
Val Arg Leu Gln Asn Glu Thr Ser Tyr Ser Arg Val Leu His Gly Tyr
        35                  40                  45
Ala Ala Gln Gln Leu Pro Ser Leu Leu Lys Glu Arg Glu Phe His Leu
    50                  55                  60
Gly Thr Leu Asn Lys Val Phe Ala Ser Gln Trp Leu Asn His Arg Gln
65                  70                  75                  80
Val Val Cys Gly Thr Lys Cys Asn Thr Phe Val Phe Val Val Asp Val Gln
                85                  90                  95
Thr Ser Gln Ile Thr Lys Ile Pro Ile Leu Lys Asp Arg Glu Pro Gly
            100                 105                 110
Gly Val Thr Gln Gln Gly Cys Gly Ile His Ala Ile Glu Leu Asn Pro
        115                 120                 125
Ser Arg Thr Leu Leu Ala Thr Gly Gly Asp Asn Pro Asn Ser Leu Ala
    130                 135                 140
Ile Tyr Arg Leu Pro Thr Leu Asp Pro Val Cys Val Gly Asp Asp Gly
145                 150                 155                 160
His Lys Asp Trp Ile Phe Ser Ile Ala Trp Ile Ser Asp Thr Met Ala
                165                 170                 175
Val Ser Gly Ser Arg Asp Gly Ser Met Gly Leu Trp Glu Val Thr Asp
            180                 185                 190
Asp Val Leu Thr Lys Ser Asp Ala Arg His Asn Val Ser Arg Val Pro
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```
        195                   200                   205
Val Tyr Ala His Ile Thr His Lys Ala Leu Lys Asp Ile Pro Lys Glu
    210                   215                   220
Asp Thr Asn Pro Asp Asn Cys Lys Val Arg Ala Leu Ala Phe Asn Asn
225                   230                   235                   240
Lys Asn Lys Glu Leu Gly Ala Val Ser Leu Asp Gly Tyr Phe His Leu
                    245                   250                   255
Trp Lys Ala Glu Asn Thr Leu Ser Lys Leu Leu Ser Thr Lys Leu Pro
            260                   265                   270
Tyr Cys Arg Glu Asn Val Cys Leu Ala Tyr Gly Ser Glu Trp Ser Val
        275                   280                   285
Tyr Ala Val Gly Ser Gln Ala His Val Ser Phe Leu Asp Pro Arg Gln
    290                   295                   300
Pro Ser Tyr Asn Val Lys Ser Val Cys Ser Arg Glu Arg Gly Ser Gly
305                   310                   315                   320
Ile Arg Ser Val Ser Phe Tyr Glu His Ile Ile Thr Val Gly Thr Gly
                    325                   330                   335
Gln Gly Ser Leu Leu Phe Tyr Asp Ile Arg Ala Gln Arg Phe Leu Glu
            340                   345                   350
Glu Arg Leu Ser Ala Cys Tyr Gly Ser Lys Pro Arg Leu Ala Gly Glu
        355                   360                   365
Asn Leu Lys Leu Thr Thr Gly Lys Gly Trp Leu Asn His Asp Glu Thr
    370                   375                   380
Trp Arg Asn Tyr Phe Ser Asp Ile Asp Phe Phe Pro Asn Ala Val Tyr
385                   390                   395                   400
Thr His Cys Tyr Asp Ser Ser Gly Thr Arg Lys Phe Val Ala Gly Gly
                    405                   410                   415
Pro Leu Pro Ser Gly Leu His Gly Asn Tyr Ala Gly Leu Trp Ser
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<210> 6263
<211> 2508
<212> DNA
<213> Homo sapiens

<400> 6263
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180
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240
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300
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360
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420
caaaataatt gggacttagt ggcagctatc aatggtgtaa taccacagga aaatggcatt
480
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540
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780
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2160

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2340
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2400
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<210> 6264
<211> 654
<212> PRT
<213> Homo sapiens
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<400> 6264
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            20                  25                  30
Asn Asn Trp Asp Leu Val Ala Ala Ile Ile Asn Gly Val Ile Pro Gln Glu
        35                  40                  45
Asn Gly Ile Leu Gln Ser Glu Tyr Gly Gly Glu Thr Ile Pro Gly Pro
    50                  55                  60
Ala Phe Asn Pro Ala Ser His Pro Ala Ser Ala Pro Thr Ser Ser Ser
65                  70                  75                  80
Ser Ser Ala Phe Arg Pro Val Met Pro Ser Arg Gln Ile Val Glu Arg
                85                  90                  95
Gln Pro Arg Met Leu Asp Phe Arg Val Glu Tyr Arg Asp Arg Asn Val
            100                 105                 110
Asp Val Val Leu Glu Asp Thr Cys Thr Val Gly Glu Ile Lys Gln Ile
        115                 120                 125
Leu Glu Asn Glu Leu Gln Ile Pro Val Ser Lys Met Leu Leu Lys Gly
    130                 135                 140
Trp Lys Thr Gly Asp Val Glu Asp Ser Thr Val Leu Lys Ser Leu His
145                 150                 155                 160
Leu Pro Lys Asn Asn Ser Leu Tyr Val Leu Thr Pro Asp Leu Pro Pro
                165                 170                 175
Pro Ser Ser Ser Ser His Ala Gly Ala Leu Gln Glu Ser Leu Asn Gln
            180                 185                 190
Asn Phe Met Leu Ile Ile Thr His Arg Glu Val Gln Arg Glu Tyr Asn
        195                 200                 205
Leu Asn Phe Ser Gly Ser Ser Thr Ile Gln Glu Val Lys Arg Asn Val
    210                 215                 220
Tyr Asp Leu Thr Ser Ile Pro Val Arg His Gln Leu Trp Glu Gly Trp
225                 230                 235                 240
Pro Thr Ser Ala Thr Asp Asp Ser Met Cys Leu Ala Glu Ser Gly Leu
                245                 250                 255
Ser Tyr Pro Cys His Arg Leu Thr Val Gly Arg Arg Ser Ser Pro Ala
            260                 265                 270
Gln Thr Arg Glu Gln Ser Glu Glu Gln Ile Thr Asp Val His Met Val
```

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                275                   280                   285
Ser Asp Ser Asp Gly Asp Asp Phe Glu Asp Ala Thr Glu Phe Gly Val
    290                   295                   300
Asp Asp Gly Glu Val Phe Gly Met Ala Ser Ser Ala Leu Arg Lys Ser
305                   310                   315                   320
Pro Met Ile Cys Phe Leu Val Pro Glu Asn Ala Glu Asn Glu Gly Asp
                325                   330                   335
Ala Leu Leu Gln Phe Thr Ala Glu Phe Ser Ser Arg Tyr Gly Asp Cys
                340                   345                   350
His Pro Val Phe Phe Ile Gly Ser Leu Glu Ala Ala Phe Gln Glu Ala
                355                   360                   365
Phe Tyr Val Lys Ala Arg Asp Arg Lys Leu Leu Ala Ile Tyr Leu His
    370                   375                   380
His Asp Glu Ser Val Leu Thr Asn Val Phe Cys Ser Gln Met Leu Cys
385                   390                   395                   400
Ala Glu Ser Ile Val Ser Tyr Leu Ser Gln Asn Phe Ile Thr Trp Ala
                405                   410                   415
Trp Asp Leu Thr Lys Asp Ser Asn Arg Ala Arg Phe Leu Thr Met Cys
                420                   425                   430
Asn Arg His Phe Gly Ser Val Val Ala Gln Thr Ile Arg Thr Gln Lys
    435                   440                   445
Thr Asp Gln Phe Pro Leu Phe Leu Ile Ile Met Gly Lys Arg Ser Ser
    450                   455                   460
Asn Gly Val Leu Asn Val Ile Gln Gly Asn Thr Thr Val Asp Glu Leu
465                   470                   475                   480
Met Met Arg Leu Asn Met Ala Ala Met Glu Ile Phe Thr Ala Gln Gln
                485                   490                   495
Glu Asp Ile Lys Asp Glu Asp Glu Arg Glu Ala Arg Glu Asn Val Lys
                500                   505                   510
Arg Glu Gln Asp Glu Ala Tyr Arg Leu Ser Leu Glu Ala Asp Arg Ala
    515                   520                   525
Lys Arg Glu Ala His Glu Arg Glu Met Ala Glu Gln Phe Arg Leu Glu
    530                   535                   540
Gln Ile Arg Lys Glu Gln Glu Glu Glu Arg Glu Ala Ile Arg Leu Ser
545                   550                   555                   560
Leu Glu Gln Ala Leu Pro Pro Glu Pro Lys Glu Glu Asn Ala Glu Pro
                565                   570                   575
Val Ser Lys Leu Arg Ile Arg Thr Pro Ser Gly Glu Phe Leu Glu Arg
    580                   585                   590
Arg Phe Leu Ala Ser Asn Lys Leu Gln Ile Val Phe Asp Phe Val Ala
    595                   600                   605
Ser Lys Gly Phe Pro Trp Asp Glu Tyr Lys Leu Leu Ser Thr Phe Pro
    610                   615                   620
Arg Arg Asp Val Thr Gln Leu Asp Pro Asn Lys Ser Leu Leu Glu Val
625                   630                   635                   640
Lys Leu Phe Pro Gln Glu Thr Leu Phe Leu Glu Ala Lys Glu
                645                   650
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<210> 6265
<211> 1344
<212> DNA
<213> Homo sapiens

<400> 6265
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1344

<210> 6266
<211> 240
<212> PRT
<213> Homo sapiens

<400> 6266
Xaa Ala Leu Pro Ala Ser His Arg Pro Gly Gln Gln Gly Leu Asn Pro

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Tyr Leu Thr Leu Asn Thr Ser Gly Ser Gly Thr Ile Leu Ile Asp Leu
                20            25            30
Ser Pro Asp Asp Lys Glu Phe Gln Ser Val Glu Glu Glu Met Gln Ser
         35            40            45
Thr Val Arg Glu His Arg Asp Gly Gly His Ala Gly Gly Ile Phe Asn
    50            55            60
Arg Tyr Asn Ile Leu Lys Ile Gln Lys Val Cys Asn Lys Lys Leu Trp
65            70            75            80
Glu Arg Tyr Thr His Arg Arg Lys Glu Val Ser Glu Glu Asn His Asn
             85            90            95
His Ala Asn Glu Arg Met Leu Phe His Gly Ser Pro Phe Val Asn Ala
         100           105           110
Ile Ile His Lys Gly Phe Asp Glu Arg His Ala Tyr Ile Gly Gly Met
    115           120           125
Phe Gly Ala Gly Ile Tyr Phe Ala Glu Asn Ser Ser Lys Ser Asn Gln
    130           135           140
Tyr Val Tyr Gly Ile Gly Gly Gly Thr Gly Cys Pro Val His Lys Asp
145           150           155           160
Arg Ser Cys Tyr Ile Cys His Arg Gln Leu Leu Phe Cys Arg Val Thr
             165           170           175
Leu Gly Lys Ser Phe Leu Gln Phe Ser Ala Met Lys Met Ala His Ser
         180           185           190
Pro Pro Gly His His Ser Val Thr Gly Arg Pro Ser Val Asn Gly Leu
         195           200           205
Ala Leu Ala Glu Tyr Val Ile Tyr Arg Gly Glu Gln Ala Tyr Pro Glu
    210           215           220
Tyr Leu Ile Thr Tyr Gln Ile Met Arg Pro Glu Gly Met Val Asp Gly
225           230           235           240
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<210> 6267
<211> 328
<212> DNA
<213> Homo sapiens

<400> 6267
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atccatgacg aggaggtcct gcggctgctc tatgaggagg ccaagggcaa cgtgctggct
240
gcacggtacc cgtgcgacgt ggaggactgc gaggctctgg gcgcccctggt gtgccgcgtg
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328
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<210> 6268
<211> 83
<212> PRT
<213> Homo sapiens
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<400> 6268
Ala Glu Trp Gly Cys Pro Ala Val Thr Gln Pro Leu Ser Pro Asp Glu
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Pro Phe Leu Gln Phe Arg Arg Asn Val Phe Phe Pro Lys Arg Arg Glu
              20   25   30
Leu Gln Ile His Asp Glu Glu Val Leu Arg Leu Leu Tyr Glu Glu Ala
         35   40   45
Lys Gly Asn Val Leu Ala Ala Arg Tyr Pro Cys Asp Val Glu Asp Cys
     50   55   60
Glu Ala Leu Gly Ala Leu Val Cys Arg Val Gln Leu Gly Pro Tyr Gln
65   70   75   80
Pro Gly Arg

<210> 6269
<211> 923
<212> DNA
<213> Homo sapiens

<400> 6269
nggcggaaga tggcgacgcc cctcgggtgg tcgaaggcgg ggtcaggatc tgtgtgtctc
60
gctttagatc aactgcggga cgtgattgag tctcaggagg aactaatcca ccagctgagg
120
aacgtgatgg ttctccagga cgaaaatttt gtcagtaaag aagagttcca ggcagtggag
180
aagaagctgg tggaagagaa agctgcccat gccaaaacca aggtcctcct ggccaaggaa
240
gaggagaagt tacagtttgc cctcggagag gtagaggtgc tatccaagca gctggagaaa
300
gagaagctgg cctttgaaaa agcgctctcc agtgtcaaga gcaaagtcct tcaggagtcc
360
agcagaaagg accagctcat caccaagtgc aatgagattg agtctcacat tataaagcaa
420
gaagatatac ttaatggcaa agagaatgag attaaagagt tgcagcaagt tatcagccag
480
cagaaacaga tcttcagccc caccaccagc ggctccgttg caggaatcac atgtctgact
540
tccggatcca gaagcagcag gaaagctaca tggcccaggt gctggaccag aagcataaga
600
aagcctcagg gacacgtcag gcccgcagcc accagcatcc cagggaaaaa taaaatggcc
660
gccgctttcc tgttctctgg ctgtaatccc cagcctctgc cttctctgct ctgggagtcc
720
ccagcctcta gcccctgcta cttccctccc tcttggatag tggtaggggt ccacaaggtg
780
ggggcttgta gcctagggga ggagctgggt ctttgttgtc tggtaggcac caccgcttcc
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tttgggtatt taatcccttc ctatataaac agccctggtt acccagtaat attccaccec
900
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923

<210> 6270

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<211> 307
<212> PRT
<213> Homo sapiens

<400> 6270
Xaa Arg Lys Met Ala Thr Pro Leu Gly Trp Ser Lys Ala Gly Ser Gly
1               5                   10                  15
Ser Val Cys Leu Ala Leu Asp Gln Leu Arg Asp Val Ile Glu Ser Gln
            20                  25                  30
Glu Glu Leu Ile His Gln Leu Arg Asn Val Met Val Leu Gln Asp Glu
        35                  40                  45
Asn Phe Val Ser Lys Glu Glu Phe Gln Ala Val Glu Lys Lys Leu Val
    50                  55                  60
Glu Glu Lys Ala Ala His Ala Lys Thr Lys Val Leu Leu Ala Lys Glu
65                  70                  75                  80
Glu Glu Lys Leu Gln Phe Ala Leu Gly Glu Val Glu Val Leu Ser Lys
            85                  90                  95
Gln Leu Glu Lys Glu Lys Leu Ala Phe Glu Lys Ala Leu Ser Ser Val
        100                 105                 110
Lys Ser Lys Val Leu Gln Glu Ser Ser Lys Lys Asp Gln Leu Ile Thr
    115                 120                 125
Lys Cys Asn Glu Ile Glu Ser His Ile Ile Lys Gln Glu Asp Ile Leu
    130                 135                 140
Asn Gly Lys Glu Asn Glu Ile Lys Glu Leu Gln Gln Val Ile Ser Gln
145                 150                 155                 160
Gln Lys Gln Ile Phe Ser Pro Pro Ala Gly Ser Val Ala Gly Ile
            165                 170                 175
Thr Cys Leu Thr Ser Gly Ser Arg Ser Ser Arg Lys Ala Thr Trp Pro
        180                 185                 190
Arg Cys Trp Thr Arg Ser Ile Arg Lys Pro Gln Gly His Val Arg Pro
    195                 200                 205
Ala Ala Thr Ser Ile Pro Gly Lys Asn Lys Met Ala Ala Ala Phe Leu
    210                 215                 220
Phe Ser Gly Cys Asn Pro Gln Pro Leu Pro Ser Leu Leu Trp Glu Ser
225                 230                 235                 240
Pro Ala Ser Ser Pro Cys Tyr Phe Pro Pro Ser Trp Ile Val Val Gly
            245                 250                 255
Val His Lys Val Gly Ala Cys Ser Leu Gly Glu Glu Leu Gly Leu Cys
            260                 265                 270
Cys Leu Val Gly Thr Thr Ala Ser Phe Gly Tyr Leu Ile Leu Pro Ser Tyr
    275                 280                 285
Ile Asn Ser Pro Gly Tyr Pro Val Ile Phe His Pro Thr Pro Ser Val
    290                 295                 300
Leu Val Asn
305

<210> 6271
<211> 1437
<212> DNA
<213> Homo sapiens

<400> 6271
nccatggcga cgggcggcca gcagaaggag aacacgctgc ttcacctctt cgccggcgggg
60
```

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tgtggaggca cagttggtgc tattttcact tgtccactag aagtcattaa gacacggttg
120
cagtcttcaa gattagctct ccggacagtc tactatcctc aggttcatct ggggaccatt
180
agtggagctg gaatggtgag accaacatcc gtgacacctg gactctttca ggttctgaag
240
gctgtatact ttgcatgtta ctccaaagcc aaagagcaat ttaatggcat tttcgtgcct
300
aacagcaata ttgtgcatct tttctcagct ggctctgcag cttttatcac aaattcctta
360
atgaatccta tatgtgatggt taaaaacccga atgcagctag aacagaaagt gaggggctct
420
aagcagatga atacactcca gtgtgtcgt tacgtttacc agaccgaagg cattcgtggc
480
ttctatagag gattaactgc ctcgtatgct ggaatttccg aaactataat ctgctttgct
540
atttatgaaa gtttaaagaa gtatctgaaa gaagctccat tagcctcttc tgcaaatggg
600
actgagaaaa attccacaag ttttttttgga cttatggcag ctgctgctct ttctaagggc
660
tgtgcctcct gcattgctta tccacacgaa gtcataagga cgaggctccg ggaagagggc
720
accaagtaca agtcttttgt ccagacggcg cgcctggtgt tccgggaaga aggctacctt
780
gcctttttata gaggactgtt tgcccagctt atccggcaga tcccaaatac tgccattgtg
840
ttgtctactt atgagttaat tgtgtacctg ttagagacc gtactcagta acaggccgga
900
aaattgtgct ctagaagaat aaaaactgaaa aactctagag aatttttttt ccccattgat
960
gtttagaaag tttgagactg aaacaggaaa ggccataaaa tatctggttc atatcacctg
1020
ttggacattt cctttggat tcatgctttc tggaaggttt aaattcatta acgttaatag
1080
ttaattataa cttttttttt aacttaagag gattcagggt taagcaccaa ctaaattaaa
1140
tcatgctatt taatttaagt atacatttgg cttgtgtcct cttttatgct cactatacta
1200
tgaaggactt aagtaattca gataaacctg ccctagaact gcagagaaaa atgataaagt
1260
gagaatacaa cttgttttat aatctgactt taagatcttg cactgctaga cagggaagaa
1320
gtgtcgcatt ttggctgggc actgttggctc acgcctgtaa tcccagcact ttgggaggcc
1380
gaggtggggtg gatcacaagg tcaggagatc gagaccatcc tggctaacca cctgcag
1437

<210> 6272
<211> 296
<212> PRT
<213> Homo sapiens

<400> 6272
Xaa Met Ala Thr Gly Gly Gln Gln Lys Glu Asn Thr Leu Leu His Leu
```

```
1                    5                    10                    15
Phe Ala Gly Gly Cys Gly Gly Thr Val Gly Ala Ile Phe Thr Cys Pro
             20                    25                    30
Leu Glu Val Ile Lys Thr Arg Leu Gln Ser Ser Arg Leu Ala Leu Arg
         35                    40                    45
Thr Val Tyr Tyr Pro Gln Val His Leu Gly Thr Ile Ser Gly Ala Gly
     50                    55                    60
Met Val Arg Pro Thr Ser Val Thr Pro Gly Leu Phe Gln Val Leu Lys
65                    70                    75                    80
Ala Val Tyr Phe Ala Cys Tyr Ser Lys Ala Lys Glu Gln Phe Asn Gly
                 85                    90                    95
Ile Phe Val Pro Asn Ser Asn Ile Val His Leu Phe Ser Ala Gly Ser
             100                   105                   110
Ala Ala Phe Ile Thr Asn Ser Leu Met Asn Pro Ile Trp Met Val Lys
         115                   120                   125
Thr Arg Met Gln Leu Glu Gln Lys Val Arg Gly Ser Lys Gln Met Asn
     130                   135                   140
Thr Leu Gln Cys Ala Arg Tyr Val Tyr Gln Thr Glu Gly Ile Arg Gly
145                   150                   155                   160
Phe Tyr Arg Gly Leu Thr Ala Ser Tyr Ala Gly Ile Ser Glu Thr Ile
                 165                   170                   175
Ile Cys Phe Ala Ile Tyr Glu Ser Leu Lys Lys Tyr Leu Lys Glu Ala
             180                   185                   190
Pro Leu Ala Ser Ala Asn Gly Thr Glu Lys Asn Ser Thr Ser Phe
         195                   200                   205
Phe Gly Leu Met Ala Ala Ala Leu Ser Lys Gly Cys Ala Ser Cys
     210                   215                   220
Ile Ala Tyr Pro His Glu Val Ile Arg Thr Arg Leu Arg Glu Glu Gly
225                   230                   235                   240
Thr Lys Tyr Lys Ser Phe Val Gln Thr Ala Arg Leu Val Phe Arg Glu
                 245                   250                   255
Glu Gly Tyr Leu Ala Phe Tyr Arg Gly Leu Phe Ala Gln Leu Ile Arg
             260                   265                   270
Gln Ile Pro Asn Thr Ala Ile Val Leu Ser Thr Tyr Glu Leu Ile Val
         275                   280                   285
Tyr Leu Leu Glu Asp Arg Thr Gln
     290                   295
```

```
<210> 6273
<211> 2355
<212> DNA
<213> Homo sapiens

<400> 6273
ncgaggatca ttgcagaggc cctgactcga gtcatctaca acctgacaga gaaggggaca
60
ccccagacat gccggtgttc acagagcaga tgatccagca ggagcagctg gactcggtga
120
tggactggtc caccaaccag ccgcggccgg cagctggtgg acaaggacag cacccttcctc
180
agcacgctgg agcaccacct gagccgctac ctgaaggacg tgaagcagca ccacgtcaag
240
gctgacaagc gggaccagca gtttgtcttc tacgaccagc tgaagcaagt gatgaatgcg
300
```

```
tacagagtca agccggccgt ctttgacctg ctcctggctg ttggcattgc tgcctacctc
360
ggcatggcct acgtggctgt ccaggtgagc agtgcccagg ctcagcactt cagcctcctc
420
tacaagaccg tccagaggct gctcgtgaag gccaagacac agtgacacag ccaccccac
480
agccggagcc cccgccgctc cacagtccct ggggccgagc acgagtgagt ggacactgcc
540
ccgccgcggg cggccctgca gggacagggg ccctctccct ccccggccggt ggttggaaca
600
ctgaattaca gagctttttt ctgttgctct ccgagactgg gggggattg tttcttcttt
660
tccttgtctt tgaacttcct tggaggagag cttgggagac gtcccgggc caggctacgg
720
acttgcggac gagcccccca gtcctggag ccggccgccc tcggtctggt gtaagcacac
780
atgcacgatt aaagaggaga cgccgggacc ccctgcccga tcgcgcgcgg cctccgccca
840
ccgcctcctg ccgcaagggg cctggactgc aggcctgacc tgctccctgc tccgtgtctg
900
tcctaggacg tccccctcccg ctccccgatg gtggcgtgga catggttatt tatctctgct
960
ccttcttgcc tggaggaggg cagtgccagc cctggggttc tgggattcca gccctcctgg
1020
agccttttgt tccccatgtg gtctcagtga cccgtccccc tgacagtggg ctcggggagc
1080
tgcatcaccc agccttcccc ttctccgact gcagggtctg atgtcatcgt tgacagccctt
1140
tgcttcgtgg gggcctggca ggcctgnncc tccccgaccc ccgacccact gcaaacccc
1200
gttcccctgc actcctcttc tcccagccca tccctccggc ccctgtgcct ctgcggcccc
1260
agcccagctc ccagggccgt cacctgcttg gccctggcca gctccctgcc ctgagtcctg
1320
agccagtgcc tggtgtttcc tgggctcggt actgggcccc caggcnatcc agggctttgc
1380
acggccagtt ggtcctccct ggggaactgg gtgcgggtgg agtactggga ggcaggaggt
1440
ggcccgggga ggccttgtgg ctcctccct cgctcctcgc cctgggcctc aagttcctca
1500
tcaatagaaa ggatgtgttc ggggtggggg cgtcaggtga gaacgtttgc tgggaaggag
1560
aggacttggg gcatggctct ggggcaccct tcctggaact cagagaggaa ggtccgggcc
1620
ctcggggaagc cttggacaga accctccacc ccgcagacca ggcgtcgtgt gtgtgtggga
1680
gagaaggagg cccgtgttga gctcagggag accccggtgt gtccgttctt tagcaatata
1740
acctacccag tgcgtgccga gcaggcttgg tggggaaggg acttgagctg ggcaagtcct
1800
ggcctggcac ccgcagccgt ctcccttccg tggcccaggg aggtgtttgc tgtccgaagg
1860
acctgggccg gcccatggga gcctgggggtt ctgtccagat aggaccaggg ggtctcactt
1920
```

```
tggccaccag ttcttcggcc agcacctctg ccctccagaa cctgcagcct ggaggggtga
1980
ggggacaacc acccctcttt cctccaggtt ggcaggggac cctcttctcc cgtctgccct
2040
gcgggttgcc cgcctcctcc agagacttgc ccaaggggcc atcaccactg gcctctgggc
2100
acttgtgctg agactctggg acccaggcag ctgccacctt gtcaccatga gagaatttgg
2160
ggagtgcttg catgctagcc agcaggctcc tgtctgggtg ccacgggggc agcattttgg
2220
agggagcttc cttccttcct tcctggacag gtcgtcagga tggatgcact gactgaccgt
2280
ctggggctca ggctggtgtg ggatgcagcc ggccgatgag aaaataaagc catattgaat
2340
gatcaaaaaa aaaaa
2355
```

```
<210> 6274
<211> 70
<212> PRT
<213> Homo sapiens
```

```
<400> 6274
Asp Pro Glu Phe Val Phe Tyr Asp Gln Leu Lys Gln Val Met Asn Ala
1               5                   10                  15
Tyr Arg Val Lys Pro Ala Val Phe Asp Leu Leu Leu Ala Val Gly Ile
            20                  25                  30
Ala Ala Tyr Leu Gly Met Ala Tyr Val Ala Val Gln Val Ser Ser Ala
        35                  40                  45
Gln Ala Gln His Phe Ser Leu Leu Tyr Lys Thr Val Gln Arg Leu Leu
    50                  55                  60
Val Lys Ala Lys Thr Gln
65                  70
```

```
<210> 6275
<211> 1534
<212> DNA
<213> Homo sapiens
```

```
<400> 6275
gggcggtagc gacaggccag agctgcggcc tgagcagcca gcgtccggca tgaaggtctg
60
gggtctggct gctgcctgct tcttgctcca gcaccatgga atgcctgcgc agtttaccct
120
gcctcctgcc ccgcgcgatg agacttcccc ggcggacgct gtgtgccctg gccttggacg
180
tgacctctgt gggtcctccc gttgctgcct gcggccgccg agccaacctg attggaagga
240
gccgagcggc gcagctttgc gggcccgacc ggctccgcgt ggcaggtgaa gtgcaccggt
300
ttagaacctc tgacgtctct caagccactt tagccagtgt agccccagta tttactgtga
360
caaaatttga caaacaggga aacgttactt cttttgaaag gaagaaaact gaattatacc
420
```

```
aagagttagg tcttcaagcc agagatttga gatttcagca tgtaatgagt atcacagtca
480
gaaacaatag gattatcatg agaatggagt atttgaaagc tgtgataact ccagagtgtc
540
ttctgatatt agattatcgt aatttaaact tagagcaatg gctgttccgg gaactccctt
600
cacagttgtc tggagagggt caactcgtta catacccttt accttttgag tttagagcta
660
tagaagcact cctgcaatat tggatcatgt tgttatctag atcaacaccc ttcaggggaa
720
acttagcatt ttgcagccac tgatccttga gaccttggat gctttggtgg accccaaaca
780
ttcttctgta gacagaagca aactgcacat tttactacag aatggcaaaa gtctatcaga
840
gttagaaaca gatattaaaa ttttcaaaga gtcaattttg gagatcttgg atgaggaaga
900
gttgctagaa gagctctgtg tatcaaaatg ggagtgaccc acaagtcttt gnaaaagagc
960
agtgctggga ttgaccatgc agaagaaatg gagttgctgt tggaaaacta ctaccgattg
1020
gctgacgatc tctccaatgc agctcgtgag cttagggtgc tgattgatga ttcacaaagt
1080
attattttca ttaatctgga cagccaccga aacgtgatga ttaggttgaa tctacagctg
1140
accatgggaa ccttctctct ttcgctcttt ggactaatgg gagttgcttt tggaatgaat
1200
ttggaatctt cccttgaaga ggaccataga atttttttggc tgattacagg aattatgttc
1260
atgggaagtg gcctcatctg gaggcgcctg ctttcattcc ttggacgaca gctagaagct
1320
ccattgcctc ctatgatggc ttctttacct aaaaagactc ttctggcaga tagaagcatg
1380
gaattgaaaa atagcctcag actggatgga cttggatcag gaaggagcat cctaacaaac
1440
cgttaggaac agcccgtgg atactgaagt tttttttatg gtagttacag gaaacttctg
1500
atactcttt tattattttc ttgtatagag tcag
1534


<210> 6276
<211> 172
<212> PRT
<213> Homo sapiens


<400> 6276
Met Gly Val Thr His Lys Ser Leu Xaa Lys Ser Ser Ala Gly Ile Asp
 1               5                   10                  15
His Ala Glu Glu Met Glu Leu Leu Leu Glu Asn Tyr Tyr Arg Leu Ala
            20                  25                  30
Asp Asp Leu Ser Asn Ala Ala Arg Glu Leu Arg Val Leu Ile Asp Asp
        35                  40                  45
Ser Gln Ser Ile Ile Phe Ile Asn Leu Asp Ser His Arg Asn Val Met
    50                  55                  60
Ile Arg Leu Asn Leu Gln Leu Thr Met Gly Thr Phe Ser Leu Ser Leu
```

```
65                      70                      75                      80
Phe Gly Leu Met Gly Val Ala Phe Gly Met Asn Leu Glu Ser Ser Leu
                    85                              90                  95
Glu Glu Asp His Arg Ile Phe Trp Leu Ile Thr Gly Ile Met Phe Met
                100                             105                 110
Gly Ser Gly Leu Ile Trp Arg Arg Leu Leu Ser Phe Leu Gly Arg Gln
            115                             120                 125
Leu Glu Ala Pro Leu Pro Pro Met Met Ala Ser Leu Pro Lys Lys Thr
        130                             135                 140
Leu Leu Ala Asp Arg Ser Met Glu Leu Lys Asn Ser Leu Arg Leu Asp
    145                             150                     155         160
Gly Leu Gly Ser Gly Arg Ser Ile Leu Thr Asn Arg
                    165                         170
```

```
<210> 6277
<211> 1206
<212> DNA
<213> Homo sapiens

<400> 6277
gctagcatgg cggtgatgga aggagacttg gtgaagaagg aaagctttgg tgtgaagctt
60
atggacttcc aggcccaccg gcggggtggc actctaaata gaaagcacat atcccccgct
120
ttccagccgc cacttccgcc cacagatggc agcaccgtgg tgcccgctgg cccagagccc
180
cctccccaga gctctagggc tgaaagcagc tctgggggtg ggactgtccc ctcttccgcg
240
ggcatactgg agcaggggcc gagcccaggc gacggcagtc ctcccaaacc gaaggaccct
300
gtatctgcag ctgtgccagc accanggag aaacaacagt cagatagcat ctggccaaaa
360
tcagccccag gcagctgctg gctcccacca gctctccatg ggccacctca caatgctgca
420
gggcccagcc cgcatacact gcgccgagct gttaaaaaac ccgctccagc accccgaaa
480
ccgggcaacc cacttcctgg ccacccgggt ggccagagtt cttcaggaac atctcagcat
540
ccacccagtc tgtcaccaaa gccacccacc cgaagcccct ctcctccacc cagcacacgg
600
gccagcctcc aggccagccc tccgcccct cccagctctc agcaccccgg aggtactcca
660
ngcagcttgt ctccaatcca agctcccaat cacccaccgc cgcagccccc tacgcaggcc
720
acgccactga tgcacaccaa acccaatagc cagggccctc ccaacccat ggcattgccc
780
agtgagcatg gacttgagca gccatctcac acccctcccc agactccaac gccccccagt
840
actccgcccc taggaaaaca gaaccccagt ctgccagctc ctcagacct ggcaggggt
900
aaccctgaaa ctgcacagcc acatgtggaa accttaccga gaccggagac agtaccaaag
960
ccaaggaacc ggcccagcgt gcccccaccc cccaacctc ctggtgtcca ctcagctggg
1020
```

```
gacagcagcc tcaccaacac agcaccaaca gcttccaaga tagtaacaga ctccaattcc
1080
agggtttcag aaccgcatcg cagcatcttt cctgaaatgc actcagactc agccagcaaa
1140
gacgtgcctg gccgcatcct gctggatata gacaatgata ccgagagcac tgccctgtga
1200
agaaag
1206


<210> 6278
<211> 399
<212> PRT
<213> Homo sapiens

<400> 6278
Ala Ser Met Ala Val Met Glu Gly Asp Leu Val Lys Lys Glu Ser Phe
1               5                   10                  15
Gly Val Lys Leu Met Asp Phe Gln Ala His Arg Arg Gly Gly Thr Leu
            20                  25                  30
Asn Arg Lys His Ile Ser Pro Ala Phe Gln Pro Pro Leu Pro Pro Thr
        35                  40                  45
Asp Gly Ser Thr Val Val Pro Ala Gly Pro Glu Pro Pro Gln Ser
    50                  55                  60
Ser Arg Ala Glu Ser Ser Ser Gly Gly Gly Thr Val Pro Ser Ser Ala
65                  70                  75                  80
Gly Ile Leu Glu Gln Gly Pro Ser Pro Gly Asp Gly Ser Pro Pro Lys
                85                  90                  95
Pro Lys Asp Pro Val Ser Ala Ala Val Pro Ala Pro Xaa Glu Lys Gln
            100                 105                 110
Gln Ser Asp Ser Ile Trp Pro Lys Ser Ala Pro Gly Ser Cys Trp Leu
        115                 120                 125
Pro Pro Ala Leu His Gly Pro Pro His Asn Ala Ala Gly Pro Ser Pro
    130                 135                 140
His Thr Leu Arg Arg Ala Val Lys Lys Pro Ala Pro Ala Pro Pro Lys
145                 150                 155                 160
Pro Gly Asn Pro Pro Pro Gly His Pro Gly Gly Gln Ser Ser Ser Gly
                165                 170                 175
Thr Ser Gln His Pro Pro Ser Leu Ser Pro Lys Pro Pro Thr Arg Ser
            180                 185                 190
Pro Ser Pro Pro Pro Ser Thr Arg Ala Ser Leu Gln Ala Ser Pro Pro
        195                 200                 205
Pro Pro Pro Ser Ser Gln His Pro Gly Gly Thr Pro Xaa Ser Leu Ser
    210                 215                 220
Pro Ile Gln Ala Pro Asn His Pro Pro Pro Gln Pro Pro Thr Gln Ala
225                 230                 235                 240
Thr Pro Leu Met His Thr Lys Pro Asn Ser Gln Gly Pro Pro Asn Pro
                245                 250                 255
Met Ala Leu Pro Ser Glu His Gly Leu Glu Gln Pro Ser His Thr Pro
            260                 265                 270
Pro Gln Thr Pro Thr Pro Pro Ser Thr Pro Pro Leu Gly Lys Gln Asn
        275                 280                 285
Pro Ser Leu Pro Ala Pro Gln Thr Leu Ala Gly Gly Asn Pro Glu Thr
    290                 295                 300
Ala Gln Pro His Ala Gly Thr Leu Pro Arg Pro Arg Pro Val Pro Lys
```

```
305                     310                   315                    320
Pro Arg Asn Arg Pro Ser Val Pro Pro Pro Gln Pro Pro Gly Val
                    325                   330                    335
His Ser Ala Gly Asp Ser Ser Leu Thr Asn Thr Ala Pro Thr Ala Ser
            340                   345                    350
Lys Ile Val Thr Asp Ser Asn Ser Arg Val Ser Glu Pro His Arg Ser
        355                   360                    365
Ile Phe Pro Glu Met His Ser Asp Ser Ala Ser Lys Asp Val Pro Gly
    370                   375                    380
Arg Ile Leu Leu Asp Ile Asp Asn Asp Thr Glu Ser Thr Ala Leu
385                     390                    395
```

<210> 6279
<211> 2795
<212> DNA
<213> Homo sapiens

<400> 6279

atggctgctg agaagcaggt cccaggcggc ggcggcggcg gcggcggcag tggcggcggc
60
ggtggacgtg gtgccggagg ggaagaaaat aaagaaaacg aacgcccttc ggccggatcg
120
aaggcaaaca aagaatttgg ggatagcctg agtttggaga ttcttcagat tattaaggaa
180
tcccagcagc agcatggtt acggcatgga gattttcaga ggtacagggg ctactgttcc
240
cgtagacaaa gacgtcttcg aaaaacactc aacttcaaga tgggtaacag acacaaattc
300
acagggaaga aagtgactga agagcttctg accgataata gatacttgct tctggttctg
360
atggatgctg aaagagcctg gagctacgcc atgcagctga aacaggaagc caacactgaa
420
ccccgaaaac ggtttcactt gttatctcgc ctacgcaaag ccgtgaagca tgcagaggaa
480
ttggaacgct tgtgtaagag caatcgcgtg gatgccaaga ccaaattaga ggctcaggct
540
tacacagctt acctctcagg aatgctacgt tttgaacatc aagaatggaa agctgccatt
600
gaggctttta acaaatgcaa aactatctat gagaagctag ccagtgcttt cacagaggag
660
caggctgtgc tgtataacca acgtgtggaa gagatttcac ccaacatccg ctattgtgca
720
tataatattg gggaccagtc agccatcaat gaactcatgc agatgagatt gaggtctggg
780
ggcactgaag gtctcttggc tgaaaaattg gaggctttga tcactcagac tcgagccaaa
840
caggcagcta ccatgagtga agtggagtgg agagggagaa cggttccagt gaagattgac
900
aaagtgcgca ttttcttatt aggactggct gataacgaag cagctattgt ccaggctgaa
960
agcgaagaaa ctaaggagcg cctgtttgaa tcaatgctca gcgagtgtcg ggacgccatc
1020
caggtggttc gggaggagct caagccagat cagaaacaga gagattatat ccttgaagga
1080

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gagccaggga aggtgtctaa tcttcaatac ttgcatagct acctgactta catcaagcta
1140
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<210> 6280
<211> 619
<212> PRT
<213> Homo sapiens

<400> 6280
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Ser Gly Gly Gly Gly Gly Arg Gly Ala Gly Gly Glu Glu Lys Lys Glu
            20   25   30
Asn Glu Arg Pro Ser Ala Gly Ser Lys Ala Asn Lys Glu Phe Gly Asp
        35   40   45
Ser Leu Ser Leu Glu Ile Leu Gln Ile Ile Lys Glu Ser Gln Gln Gln
    50   55   60
His Gly Leu Arg His Gly Asp Phe Gln Arg Tyr Arg Gly Tyr Cys Ser
65   70   75   80
Arg Arg Gln Arg Arg Leu Arg Lys Thr Leu Asn Phe Lys Met Gly Asn
                85   90   95
Arg His Lys Phe Thr Gly Lys Lys Val Thr Glu Glu Leu Leu Thr Asp
            100   105   110
Asn Arg Tyr Leu Leu Val Leu Met Asp Ala Glu Arg Ala Trp Ser
115   120   125
Tyr Ala Met Gln Leu Lys Gln Glu Ala Asn Thr Glu Pro Arg Lys Arg
    130   135   140
Phe His Leu Leu Ser Arg Leu Arg Lys Ala Val Lys His Ala Glu Glu
145   150   155   160
Leu Glu Arg Leu Cys Lys Ser Asn Arg Val Asp Ala Lys Thr Lys Leu
                165   170   175
Glu Ala Gln Ala Tyr Thr Ala Tyr Leu Ser Gly Met Leu Arg Phe Glu
            180   185   190
His Gln Glu Trp Lys Ala Ala Ile Glu Ala Phe Asn Lys Cys Lys Thr
        195   200   205
Ile Tyr Glu Lys Leu Ala Ser Ala Phe Thr Glu Glu Gln Ala Val Leu
    210   215   220
Tyr Asn Gln Arg Val Glu Glu Ile Ser Pro Asn Ile Arg Tyr Cys Ala
225   230   235   240
Tyr Asn Ile Gly Asp Gln Ser Ala Ile Asn Glu Leu Met Gln Met Arg
                245   250   255
Leu Arg Ser Gly Gly Thr Glu Gly Leu Leu Ala Glu Lys Leu Glu Ala
            260   265   270
Leu Ile Thr Gln Thr Arg Ala Lys Gln Ala Ala Thr Met Ser Glu Val
    275   280   285
Glu Trp Arg Gly Arg Thr Val Pro Val Lys Ile Asp Lys Val Arg Ile
    290   295   300
Phe Leu Leu Gly Leu Ala Asp Asn Glu Ala Ala Ile Val Gln Ala Glu
305   310   315   320
Ser Glu Glu Thr Lys Glu Arg Leu Phe Glu Ser Met Leu Ser Glu Cys
            325   330   335
Arg Asp Ala Ile Gln Val Val Arg Glu Glu Leu Lys Pro Asp Gln Lys

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              340                    345                    350
Gln Arg Asp Tyr Ile Leu Glu Gly Glu Pro Gly Lys Val Ser Asn Leu
          355                    360                    365
Gln Tyr Leu His Ser Tyr Leu Thr Tyr Ile Lys Leu Ser Thr Ala Ile
      370                    375                    380
Lys Arg Asn Glu Asn Met Ala Lys Gly Leu His Arg Ala Leu Leu Gln
385                    390                    395                    400
Gln Gln Pro Glu Asp Asp Ser Lys Arg Ser Pro Arg Pro Gln Asp Leu
                  405                    410                    415
Ile Arg Leu Tyr Asp Ile Ile Leu Gln Asn Leu Val Glu Leu Leu Gln
          420                    425                    430
Leu Pro Gly Leu Glu Glu Asp Lys Ala Phe Gln Lys Glu Ile Gly Leu
          435                    440                    445
Lys Thr Leu Val Phe Lys Ala Tyr Arg Cys Phe Phe Ile Ala Gln Ser
      450                    455                    460
Tyr Val Leu Val Lys Lys Trp Ser Glu Ala Leu Val Leu Tyr Asp Arg
465                    470                    475                    480
Val Leu Lys Tyr Ala Asn Glu Val Asn Ser Asp Ala Gly Ala Phe Lys
                  485                    490                    495
Asn Ser Leu Lys Asp Leu Pro Asp Val Gln Glu Leu Ile Thr Gln Val
          500                    505                    510
Arg Ser Glu Lys Cys Ser Leu Gln Ala Ala Ala Ile Leu Asp Ala Asn
          515                    520                    525
Asp Ala His Gln Thr Glu Thr Ser Ser Ser Gln Val Lys Asp Asn Lys
      530                    535                    540
Pro Leu Val Glu Arg Phe Glu Thr Phe Cys Leu Asp Pro Ser Leu Val
545                    550                    555                    560
Thr Lys Gln Ala Asn Leu Val His Phe Phe Pro Pro Gly Phe Gln Pro Ile
                  565                    570                    575
Pro Cys Lys Pro Leu Phe Phe Asp Leu Ala Leu Asn His Val Ala Phe
          580                    585                    590
Pro Pro Leu Glu Asp Lys Leu Glu Gln Lys Thr Lys Ser Gly Leu Thr
          595                    600                    605
Gly Tyr Ile Lys Gly Ile Phe Gly Phe Arg Ser
      610                    615

<210> 6281
<211> 741
<212> DNA
<213> Homo sapiens

<400> 6281
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180
gcggtgctca ctgcagagat caccagcaag attgcgaggg tcccacgact cccgcctgat
240
gaaaagaaac agatggttgc aaatgtggag aaacagcttg aagaagcgaa agaactgctt
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gaacagatgg atttggaagt ccgagagata ccaccccaa gtcgagggat gtacagcaac
360
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480
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600
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741


<210> 6282
<211> 162
<212> PRT
<213> Homo sapiens

<400> 6282
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Ala Glu Ile Thr Ser Lys Ile Ala Arg Val Pro Arg Leu Pro Pro Asp
            20                  25                  30
Glu Lys Lys Gln Met Val Ala Asn Val Glu Lys Gln Leu Glu Glu Ala
        35                  40                  45
Lys Glu Leu Leu Glu Gln Met Asp Leu Glu Val Arg Glu Ile Pro Pro
    50                  55                  60
Gln Ser Arg Gly Met Tyr Ser Asn Arg Met Arg Ser Tyr Lys Gln Glu
65                  70                  75                  80
Met Gly Lys Leu Glu Thr Asp Phe Lys Arg Ser Arg Ile Ala Tyr Ser
                85                  90                  95
Asp Glu Val Arg Asn Glu Leu Leu Gly Asp Asp Gly Asn Ser Ser Glu
            100                 105                 110
Asn Gln Arg Ala His Leu Leu Asp Asn Thr Glu Arg Leu Glu Arg Ser
        115                 120                 125
Ser Arg Arg Leu Glu Ala Gly Tyr Gln Ile Ala Val Glu Thr Gly Glu
    130                 135                 140
Asn Ser Glu Ser Glu Gln Ile Val Leu Leu Met His Ser Ser Leu His
145                 150                 155                 160
Asn Thr


<210> 6283
<211> 2312
<212> DNA
<213> Homo sapiens

<400> 6283
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120
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1740
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2160
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2312


<210> 6284
<211> 122
<212> PRT
<213> Homo sapiens

<400> 6284
His Ser Arg Val Cys Pro Pro Phe Cys Pro Gln Trp Phe Leu Gly Phe
1               5                   10                  15
Ala Val Phe Leu Leu Pro Trp Ala Ser Met Trp Leu Arg Ser Leu Leu
            20                  25                  30
Lys Pro Ile His Val Phe Phe Gly Ala Ala Ile Leu Ser Leu Ser Ile
        35                  40                  45
Ala Ser Val Ile Ser Gly Ile Asn Glu Lys Leu Phe Phe Ser Leu Lys
    50                  55                  60
Asn Thr Thr Arg Pro Tyr His Ser Leu Pro Ser Glu Ala Val Phe Ala
65                  70                  75                  80
Asn Ser Thr Gly Met Leu Val Val Ala Phe Gly Leu Leu Val Leu Tyr
                85                  90                  95
Ile Leu Leu Ala Ser Ser Trp Lys Arg Pro Glu Pro Gly Ile Leu Thr
            100                 105                 110
Asp Arg Gln Pro Leu Leu His Asp Gly Glu
        115                 120


<210> 6285
<211> 2542
<212> DNA
<213> Homo sapiens

<400> 6285
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120
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1740

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2280
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2542


<210> 6286
<211> 57
<212> PRT
<213> Homo sapiens

<400> 6286
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Ser Cys Gly Gln His Glu Gln Gln Ile Pro Pro Asp His His Lys Asp
            20                  25                  30
Ala Gly Asn Ile Tyr Leu Gly Thr Ser Pro Pro Ser Gln Glu Pro Ser
        35                  40                  45
Ser Pro Trp Ala Ser Trp His Arg Ser
    50                  55


<210> 6287
<211> 1674
<212> DNA
<213> Homo sapiens

<400> 6287
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120
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240
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<210> 6288
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<211> 269
<212> PRT
<213> Homo sapiens

<400> 6288
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His Met Ile Ser Ser Trp Glu Gln Lys Asn Asn Cys Val Met Pro Glu
            20                  25                  30
Asp Val Lys Asn Phe Tyr Leu Met Thr Asn Gly Phe His Met Thr Trp
        35                  40                  45
Ser Val Lys Leu Asp Glu His Ile Ile Pro Leu Gly Ser Met Ala Ile
    50                  55                  60
Asn Ser Ile Ser Lys Leu Thr Gln Leu Thr Gln Ser Ser Met Tyr Ser
65                  70                  75                  80
Leu Pro Asn Ala Pro Thr Leu Ala Asp Leu Glu Asp Asp Thr His Glu
                85                  90                  95
Ala Ser Asp Asp Gln Pro Glu Lys Pro His Phe Asp Ser Arg Ser Val
            100                 105                 110
Ile Phe Glu Leu Asp Ser Cys Asn Gly Ser Gly Lys Val Cys Leu Val
        115                 120                 125
Tyr Lys Ser Gly Lys Pro Ala Leu Ala Glu Asp Thr Gly Ile Trp Phe
    130                 135                 140
Leu Asp Arg Ala Leu Tyr Trp His Phe Leu Thr Asp Thr Phe Thr Ala
145                 150                 155                 160
Tyr Tyr Arg Leu Leu Ile Thr His Leu Gly Leu Pro Gln Trp Gln Tyr
                165                 170                 175
Ala Phe Thr Ser Tyr Gly Ile Ser Pro Gln Ala Lys Gln Trp Phe Ser
            180                 185                 190
Met Tyr Lys Pro Ile Thr Tyr Asn Thr Asn Leu Leu Thr Glu Glu Thr
    195                 200                 205
Asp Ser Phe Val Asn Lys Leu Asp Pro Ser Lys Val Phe Lys Ser Lys
210                 215                 220
Asn Lys Ile Val Ile Pro Lys Lys Lys Gly Pro Val Gln Pro Ala Gly
225                 230                 235                 240
Gly Gln Lys Gly Pro Ser Gly Pro Ser Gly Pro Ser Thr Ser Ser Thr
                245                 250                 255
Ser Lys Ser Ser Ser Gly Ser Gly Asn Pro Thr Arg Lys
            260                 265

<210> 6289
<211> 1321
<212> DNA
<213> Homo sapiens

<400> 6289
acactgcgtc cggggccaga cgacgatatc agcgcggggt ccccacaacg ccatggggca
60
gagccaactc tcgagcgcgt gatcgaagcc cgcagttttt tcgcccccgt cacttccggg
120
tgcgacaatc tcttctgtcc ggccagccgc tggagtcgtt aggtgccgcc ttgcttctga
180
cgagccacac gtttgcttct tccctgtgtt cccagctgga gggacatgag tgtccctggg
240
```

```
ccgtcgtctc cggacggggc cctgacacgg ccaccctact gcctggaggc cggggagccg
300
acgcctggtt taagtgacac ttctccagat gaagggttaa tagaggactt gactatagaa
360
gacaaagcag tggagcaact ggcagaagga ttgctttctc attatttgcc agatctgcag
420
agatcaaaac aagccctcca ggaactcaca cagaaccaag ttgtattgtt agacacactg
480
gaacaagaga tttcaaaatt taaagaatgt cattctatgt tggatattaa tgctttgttt
540
gctgaggcta aacactatca tgccaagttg gtgaatataa gaaaagagat gctgatgctt
600
catgaaaaaa catcaaagtt aaaaaaaaga gcacttaaac tgcagcagaa gaggcaaaaa
660
gaagagttgg aaagggagca gcaacgagag aaggggtttg aaagagaaaa gcagttaact
720
gccagaccag ccaaaaggat gtgaaaagtt gtgtttgtgt gtttttcttct cctgtcccat
780
atttgggtta tgatgactca agtgtagact gaagttgagg tagtgcctta tgccattatg
840
tcatatgttg aaatccttat tccggtatta ctgtgtctcc atgccttttt tccaagtagc
900
agacgtcatg ttgcatggtt tttgatattt atatgtaagt ttttcaaatt ttgcttaatt
960
ttaaaattta ttattttgat cttgaattat ttataaactg gaaagtggtt tgattattgt
1020
gagtcaaaac tctaagtggt taaaaattag tatgaatttt ttagcttctt aatgaatatg
1080
gatttaaaac tctccagttc ttattttatg aaatgacttg cctttctggt aatacaatgc
1140
tgatttttta gtaattgcct tttcattact ttgttaagaa gaaatgccag ctgtttaatc
1200
acacctaccc ctggaaaaga ggtaaacctt ttgaacagtt gaatttcatc agaagctcta
1260
tagctttttg gtgagaggaa gtgatactct ttattacaag aaacaaggaa ttaacaaaaa
1320
t
1321

<210> 6290
<211> 172
<212> PRT
<213> Homo sapiens

<400> 6290
Met Ser Val Pro Gly Pro Ser Ser Pro Asp Gly Ala Leu Thr Arg Pro
1               5                   10                  15
Pro Tyr Cys Leu Glu Ala Gly Glu Pro Thr Pro Gly Leu Ser Asp Thr
            20                  25                  30
Ser Pro Asp Glu Gly Leu Ile Glu Asp Leu Thr Ile Glu Asp Lys Ala
        35                  40                  45
Val Glu Gln Leu Ala Glu Gly Leu Leu Ser His Tyr Leu Pro Asp Leu
    50                  55                  60
Gln Arg Ser Lys Gln Ala Leu Gln Glu Leu Thr Gln Asn Gln Val Val
```

```
65                      70                    75                      80
Leu Leu Asp Thr Leu Glu Gln Glu Ile Ser Lys Phe Lys Glu Cys His
                    85                    90                    95
Ser Met Leu Asp Ile Asn Ala Leu Phe Ala Glu Ala Lys His Tyr His
                100                   105                   110
Ala Lys Leu Val Asn Ile Arg Lys Glu Met Leu Met Leu His Glu Lys
            115                   120                   125
Thr Ser Lys Leu Lys Lys Arg Ala Leu Lys Leu Gln Gln Lys Arg Gln
        130                   135                   140
Lys Glu Glu Leu Glu Arg Glu Gln Gln Arg Glu Lys Gly Phe Glu Arg
145                   150                   155                   160
Glu Lys Gln Leu Thr Ala Arg Pro Ala Lys Arg Met
                165                   170
```

```
<210> 6291
<211> 2718
<212> DNA
<213> Homo sapiens
```

```
<400> 6291
naggttgtct tggcggggggg cgtggcacct gcactgttcc gggggatgcc agctcacttc
60
tcggacagcg cccagactga ggcctgctac cacatgctga gccggcccca gccgccaccc
120
gaccccctcc tgctccagcg tctgccacgg cccagctccc tgtcagacaa gacccagctc
180
cacagcaggt ggctggactc gtcgcggtgt ctcatgcagc agggcatcaa ggctggggac
240
gcactctggc tgcgcttcaa gtactacagc ttcttcgatt tggatcccaa gacagacccc
300
gtgcggctga cacagctgta tgagcaggcc cggtgggacc tgctgctgga ggagattgac
360
tgcaccgagg aggagatgat ggtgtttgcc gccctgcagt accacatcaa caagctgtcc
420
cagagcgggg aggtggggga gccggctggc acagacccag ggctggacga cctggatgtg
480
gccctgagca acctggaggt gaagctggag gggtcggcgc ccacagatgt gctggacagc
540
ctcaccacca tcccagagct caaggactac ctccgaatct tcggccccg gaagctgacc
600
ctgaagggct accgccaaca ctgggtggtg ttcaaggaga ccacactgtc ctactacaag
660
agccaggacg aggcccctgg ggacccccatt cagcagctca acctcaaggg ctgtgtgaggtg
720
gttcccgatg ttaacgtctc cggccagaag ttctgcatta aactcctagt gccctcccct
780
gagggcatga gtgagatcta cctgcggtgc caggatgagc agcagtatgc ccgctggatg
840
gctggctgcc gcctggcctc caaaggccgc accatggccg acagcagcta ccaccagcag
900
gtgcaggcca tcctggcctt cctcagcctg cagcacgggc agtggggggc caggcaacca
960
ccccacggcc ctgatgcctc tgccgagggc ctcaacccct acggcctcgt tgcccccgt
1020
```

```
ttccagcgaa agttcaaggc caagcagctc accccacgga tcctggaagc ccaccagaat
1080
gtggcccagt tgtcgctggc agaggcccag ctgcgcttca tccaggcctg gcagtccctg
1140
cccgacttcg gcatctccta tgtcatggtc aggttcaagg gcagcaggaa agacgagatc
1200
ctgggcatcg ccaacaaccg actgatccgc atcgacttgg ccgtgggtga cgtggtcaag
1260
acctggcgtt tcagcaacat gcgccagtgg aatgtcaact gggacatccg gcaggtggcc
1320
atcgagtttg atgaacacat caatgtggcc ttcagctgtg tgtctgccag ctgccgaatt
1380
gtacacgagt atatcggggg ctacattttc ctgtcgacgc gggagcgggc ccgtggggag
1440
gagctggatg aagacctctt cctgcgactc accgggggcc atgaggcctt ctgagggctg
1500
tctgattgcc cctgccctgc tcaccaccct gtcacagcca ctcccaagcc cacacccaca
1560
ggggctcact gccccacacc cgctccaggc aggcacccag ctgggcattt cacctgctgt
1620
cactgacttt gtgcaggcca aggacctggc agggccagac gctgtaccat cacccaggcc
1680
agggatgggg gtggggtcc ctgagctcat gtggtgcccc ctttccttgt ctgagtggct
1740
gaggctgata cccctgacct atctgcagtc ccccagcaca caaggaagac cagatgtagc
1800
tacaggatga tgaaacatgg tttcaaacga gttctttctt gttacttttt aaaatttctt
1860
ttttataaat taatattttta ttgttggatc ctcctccttt ctctggagct gtgcttgggg
1920
ctactctgac actctgtctc ttcatcacca gccaaggaaa ggggctttcg ggtagggcgt
1980
agctgcaggg cctccttgaa gtacttggga aggaggaagc catcagtatt ccctggagtc
2040
agaatcaccc cattggcaga gcggaagaag ggtattccat ctgccagagc caggggtcca
2100
tcgatgaaca cagctatttc acaatgggac cgcatgccac tgatgatacc ggggtctcca
2160
ggcagtcctg gggccaggtg aatgtgcgtc cttccctggc aggacaggcc tttgagtagg
2220
atggatggc agtgcttcca gaatgtacca tggactagca tcgggggcag ggctgcggtg
2280
tctccagggg catcagctcc aacttaggta cctgcaggga atggccctgg ttggcccgga
2340
tgagaaggcc agtgctggga tcccccagct gcagggcgaa ccgctgcttc ctattggtgt
2400
ccaccacgcg ctgcacatct tcagcagaga agccgcgaa ctggggcaac tgcaggaggg
2460
tgccagggg cacgaagcca tctgtgggca ggcagggtgc tcaggagcta accttgctct
2520
ggactgggcc agggttaaca gggagccaca ggcaaccgaa acaaagtctg ggcttggaga
2580
tcgcttgggc atcctctgtg ggacctttag aaagtctccc ctttctgggc cgcagttttc
2640
```

```
aacttacata aaaagaggat ctgcctcacg gaggggcagg gaggtgagtg cccagcatag
2700
cgctggcccg gagtgcac
2718
```

```
<210> 6292
<211> 497
<212> PRT
<213> Homo sapiens
```

```
<400> 6292
Xaa Val Val Leu Ala Gly Gly Val Ala Pro Ala Leu Phe Arg Gly Met
 1               5                   10                  15
Pro Ala His Phe Ser Asp Ser Ala Gln Thr Glu Ala Cys Tyr His Met
            20                  25                  30
Leu Ser Arg Pro Gln Pro Pro Asp Pro Leu Leu Leu Gln Arg Leu
    35                  40                  45
Pro Arg Pro Ser Ser Leu Ser Asp Lys Thr Gln Leu His Ser Arg Trp
    50                  55                  60
Leu Asp Ser Ser Arg Cys Leu Met Gln Gln Gly Ile Lys Ala Gly Asp
65                  70                  75                  80
Ala Leu Trp Leu Arg Phe Lys Tyr Tyr Ser Phe Phe Asp Leu Asp Pro
                85                  90                  95
Lys Thr Asp Pro Val Arg Leu Thr Gln Leu Tyr Glu Gln Ala Arg Trp
            100                 105                 110
Asp Leu Leu Leu Glu Glu Ile Asp Cys Thr Glu Glu Glu Met Met Val
        115                 120                 125
Phe Ala Ala Leu Gln Tyr His Ile Asn Lys Leu Ser Gln Ser Gly Glu
    130                 135                 140
Val Gly Glu Pro Ala Gly Thr Asp Pro Gly Leu Asp Asp Leu Asp Val
145                 150                 155                 160
Ala Leu Ser Asn Leu Glu Val Lys Leu Glu Gly Ser Ala Pro Thr Asp
                165                 170                 175
Val Leu Asp Ser Leu Thr Thr Ile Pro Glu Leu Lys Asp Tyr Leu Arg
            180                 185                 190
Ile Phe Arg Pro Arg Lys Leu Thr Leu Lys Gly Tyr Arg Gln His Trp
        195                 200                 205
Val Val Phe Lys Glu Thr Thr Leu Ser Tyr Tyr Lys Ser Gln Asp Glu
    210                 215                 220
Ala Pro Gly Asp Pro Ile Gln Gln Leu Asn Leu Lys Gly Cys Glu Val
225                 230                 235                 240
Val Pro Asp Val Asn Val Ser Gly Gln Lys Phe Cys Ile Lys Leu Leu
                245                 250                 255
Val Pro Ser Pro Glu Gly Met Ser Gly Ile Tyr Leu Arg Cys Gln Asp
            260                 265                 270
Glu Gln Gln Tyr Ala Arg Trp Met Ala Gly Cys Arg Leu Ala Ser Lys
        275                 280                 285
Gly Arg Thr Met Ala Asp Ser Ser Tyr Thr Ser Glu Val Gln Ala Ile
    290                 295                 300
Leu Ala Phe Leu Ser Leu Gln His Gly Gln Trp Gly Pro Arg Gln Pro
305                 310                 315                 320
Pro Pro Arg Pro Asp Ala Ser Ala Glu Gly Leu Asn Pro Tyr Gly Leu
                325                 330                 335
Val Ala Pro Arg Phe Gln Arg Lys Phe Lys Ala Lys Gln Leu Thr Pro
```

```
            340              345              350
Arg Ile Leu Glu Ala His Gln Asn Val Ala Gln Leu Ser Leu Ala Glu
    355              360              365
Ala Gln Leu Arg Phe Ile Gln Ala Trp Gln Ser Leu Pro Asp Phe Gly
    370              375              380
Ile Ser Tyr Val Met Val Arg Phe Lys Gly Ser Arg Lys Asp Glu Ile
385              390              395              400
Leu Gly Ile Ala Asn Asn Arg Leu Ile Arg Ile Asp Leu Ala Val Gly
            405              410              415
Asp Val Val Lys Thr Trp Arg Phe Ser Asn Met Arg Gln Trp Asn Val
            420              425              430
Asn Trp Asp Ile Arg Gln Val Ala Ile Glu Phe Asp Trp His Ile Asn
    435              440              445
Val Ala Phe Ser Cys Val Ser Ala Ser Cys Arg Ile Val His Glu Tyr
    450              455              460
Ile Gly Gly Tyr Ile Phe Leu Ser Thr Arg Glu Arg Ala Arg Gly Glu
465              470              475              480
Glu Leu Asp Glu Asp Leu Phe Leu Gln Leu Thr Gly Gly His Glu Ala
            485              490              495
Phe
```

```
<210> 6293
<211> 750
<212> DNA
<213> Homo sapiens

<400> 6293
nggccgggcg ccatggcacc gtggggcaag cggctggctg gcgtgcgcgg ggtgctgctt
60
gacatctcgg gcgtgctgta cgacagcggc gcgtgcggcg gcacggccat cgccggctcg
120
gtggaggcgg tggccagact gaagcgttcc cggctgaagg tgaggttctg caccaacgag
180
tcgcagaagt cccgggcaga gctggtgggg cagcttcaga ggctgggatt tgacatctct
240
gagcaggagg taaccgcccc ggcaccagct gcctgccaga tcctgaagga gcgaggcctg
300
cgaccatacc tgctcatcca tgacggagtc cgctcagaat ttgatcagat cgacacatcc
360
aacccaaact gtgtggtaat tgcagacgca ggagaaagct tttcttatca aaacatgaat
420
aacgccttcc aggtgctcat ggagctggaa aaacctgtgc tcatatcact gggaaaaggg
480
cgttactaca aggagacctc tggcctgatg ctggacgttg gtccctacat gaaggcgctt
540
gagtatgcct gtggcatcaa agccgaggtg gtggggaagc cttctcctga gtttttcaag
600
tctgccctgc aagcgatagg agtggaagcc caccaggccg tcatgattgg ggacgatatc
660
gtgggcgacg tcggcggtgc ccagcggtgt ggaatgagag cgctgcaggt gcgcaccggg
720
aagttcaggc ccagtgacga gcaccatccg
750
```

```
<210> 6294
<211> 250
<212> PRT
<213> Homo sapiens

<400> 6294
Xaa Pro Gly Ala Met Ala Pro Trp Gly Lys Arg Leu Ala Gly Val Arg
 1               5                   10                  15
Gly Val Leu Leu Asp Ile Ser Gly Val Leu Tyr Asp Ser Gly Ala Cys
                20                  25                  30
Gly Gly Thr Ala Ile Ala Gly Ser Val Glu Ala Val Ala Arg Leu Lys
            35                  40                  45
Arg Ser Arg Leu Lys Val Arg Phe Cys Thr Asn Glu Ser Gln Lys Ser
        50                  55                  60
Arg Ala Glu Leu Val Gly Gln Leu Gln Arg Leu Gly Phe Asp Ile Ser
65                  70                  75                  80
Glu Gln Glu Val Thr Ala Pro Ala Pro Ala Ala Cys Gln Ile Leu Lys
                85                  90                  95
Glu Arg Gly Leu Arg Pro Tyr Leu Leu Ile His Asp Gly Val Arg Ser
                100                 105                 110
Glu Phe Asp Gln Ile Asp Thr Ser Asn Pro Asn Cys Val Val Ile Ala
        115                 120                 125
Asp Ala Gly Glu Val Ser Phe Ser Tyr Gln Asn Met Asn Asn Ala Phe Gln
        130                 135                 140
Val Leu Met Glu Leu Glu Lys Pro Val Leu Ile Ser Leu Gly Lys Gly
145                 150                 155                 160
Arg Tyr Tyr Lys Glu Thr Ser Gly Leu Met Leu Asp Asn Gly Pro Tyr
                165                 170                 175
Met Lys Ala Leu Glu Tyr Ala Cys Gly Ile Lys Ala Glu Val Val Gly
        180                 185                 190
Lys Pro Ser Pro Glu Phe Phe Lys Ser Ala Leu Gln Ala Ile Gly Val
        195                 200                 205
Glu Ala His Gln Ala Val Met Ile Gly Asp Asp Ile Val Gly Asp Val
        210                 215                 220
Gly Gly Ala Gln Arg Cys Gly Met Arg Ala Leu Gln Val Arg Thr Gly
225                 230                     235                 240
Lys Phe Arg Pro Ser Asp Glu His His Pro
                245                 250


<210> 6295
<211> 2091
<212> DNA
<213> Homo sapiens

<400> 6295
ggcgccgggg gcggggtgg gaggcggagg cggggccggg gcgccgcggg cggggcgccg
60
ggggcggggc gagtccggag gactcctcgg actgcgcgga acatgcggtt ctggggttgg
120
cgcgccgcgg cagccctccg gctgtggggc cgggtagttg aacggggtcga ggccgggga
180
ggcgtggggc cgtttcaggc ctgcggctgt cggctggtgc ttggcggcag ggacgatgtg
240
```

```
agtgcggggc tgagaggcag ccatggggcc cgcggtgagc ccttggaccc ggcgcgcccc
300
ttgcagaggc ctcccagacc cgaggtgccc agggcattcc ggaggcagca gagggcagca
360
gctcccagtt tcttcttttc gagtattaaa ggtggaagaa ggtccatatc tttttctgtg
420
ggtgcttcaa gtgttgttgg aagtggaggc agcagtgaca aggggaagct ttccctgcag
480
gatgtagctg agctgattcg ggccagagcc tgccagaggg tggtggtcat ggtgggggcc
540
ggcatcagca cacccagtgg cattccagac ttcagatcgc cggggagtgg cctgtacagc
600
aacctccagc agtacgatct cccgtacccc gaggccattt ttgaactccc attcttcttt
660
cacaacccca agcccttttt cactttggcc aaggagctgt accctggaaa ctacaagccc
720
aacgtcactc actactttct ccggctgctt catgacaagg ggctgcttct gcggctctac
780
acgcagaaca tcgatgggct tgagagagtg tcgggcatcc ctgcctcaaa gctggttgaa
840
gctcatggaa cctttgcctc tgccacctgc acagtctgcc aaagaccctt cccaggggag
900
gacattcggg ctgacgtgat ggcagacagg gttccccgct gcccggtctg caccggcgtt
960
gtgaagcccg acattgtgtt ctttggggag ccgctgcccc agaggttctt gctgcatgtg
1020
gttgatttcc ccatggcaga tctgctgctc atccttggga cctccctgga ggtggagcct
1080
tttgccagct tgaccgaggc cgtgcggagc tcagttcccc gactgctcat caaccgggac
1140
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1200
gttcacggcg tggaaagcct agtggagctt ctgggctgga cagaagagat gcgggacctt
1260
gtgcagcggg aaactgggaa gcttgatgga ccagacaaat aggatgatgg cttgaccgag
1320
gccgtgcgga cgtcagttcc ccgactgctc atcaaccggg acttggtggg gcccttggct
1380
tggcatcctc gcagcaggga cgtggcccag ctggggggac gtggttcacg cgtggaaagc
1440
ctagtggagc ttctgggctg gacagaagag atgcgggacc ttgtgcagcg gggaaactgg
1500
aagcttgatg gaccagacaa ataggatgat ggctgccccc acacaataaa tggtaacata
1560
ggagacatcc acatcccaat tctgacaaga cctcatgcct gaagacagct tgggcaggtg
1620
aaaccagaat atgtgaactg agtggacacc cgaggctgcc actggaatgt cttctcaggc
1680
catgagctgc agtgactggt agggctgtgt ttacagtcag ggccaccccg tcacatatac
1740
aaaggagctg cctgcctgtt tgctgtgttg aactcttcac tctgctgaag ctcctaatgg
1800
aaaaagcttt cttctgactg tgaccctctt gaactgaatc agaccaactg gaatcccaga
1860
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```
ccgagtctgc tttctgtgcc tagttgaacg gcaagctcgg catctgttgg ttacaagatc
1920
cagacttggg ccgagcggtc cccagccctc ttcatgttcc gaagtgtagt cttgaggccc
1980
tggtgccgca cttctagcat gttggtctcc tttagtgggg ctatttttaa tgagagaaaa
2040
tctgttcttt ccagcatgaa atacatttag tctcctcaaa aaaaaaaaac a
2091


<210> 6296
<211> 399
<212> PRT
<213> Homo sapiens

<400> 6296
Met Ala Phe Trp Gly Trp Arg Ala Ala Ala Ala Leu Arg Leu Trp Gly
1               5                   10                  15
Arg Val Val Glu Arg Val Glu Ala Gly Gly Gly Val Gly Pro Phe Gln
            20                  25                  30
Ala Cys Gly Cys Arg Leu Val Leu Gly Gly Arg Asp Asp Val Ser Ala
        35                  40                  45
Gly Leu Arg Gly Ser His Gly Ala Arg Gly Glu Pro Leu Asp Pro Ala
    50                  55                  60
Arg Pro Leu Gln Arg Pro Pro Arg Pro Glu Val Pro Arg Ala Phe Arg
65                  70                  75                  80
Arg Gln Pro Arg Ala Ala Ala Pro Ser Phe Phe Phe Ser Ser Ile Lys
                85                  90                  95
Gly Gly Arg Ser Ile Ser Phe Ser Val Gly Ala Ser Ser Val Val
            100                 105                 110
Gly Ser Gly Gly Ser Ser Asp Lys Gly Lys Leu Ser Leu Gln Asp Val
        115                 120                 125
Ala Glu Leu Ile Arg Ala Arg Ala Cys Gln Arg Val Val Val Met Val
    130                 135                 140
Gly Ala Gly Ile Ser Thr Pro Ser Gly Ile Pro Asp Phe Arg Ser Pro
145                 150                 155                 160
Gly Ser Gly Leu Tyr Ser Asn Leu Gln Gln Tyr Asp Leu Pro Tyr Pro
                165                 170                 175
Glu Ala Ile Phe Glu Leu Pro Phe Phe Phe His Asn Pro Lys Pro Phe
            180                 185                 190
Phe Thr Leu Ala Lys Glu Leu Tyr Pro Gly Asn Tyr Lys Pro Asn Val
        195                 200                 205
Thr His Tyr Phe Leu Arg Leu Leu His Asp Lys Gly Leu Leu Leu Arg
    210                 215                 220
Leu Tyr Thr Gln Asn Ile Asp Gly Leu Glu Arg Val Ser Gly Ile Pro
225                 230                 235                 240
Ala Ser Lys Leu Val Glu Ala His Gly Thr Phe Ala Ser Ala Thr Cys
                245                 250                 255
Thr Val Cys Gln Arg Pro Phe Pro Gly Glu Asp Ile Arg Ala Asp Val
            260                 265                 270
Met Ala Asp Arg Val Pro Arg Cys Pro Val Cys Thr Gly Val Val Lys
        275                 280                 285
Pro Asp Ile Val Phe Phe Gly Glu Pro Leu Pro Gln Arg Phe Leu Leu
    290                 295                 300
His Val Val Asp Phe Pro Met Ala Asp Leu Leu Leu Ile Leu Gly Thr
```

```
305                      310                      315                      320
Ser Leu Glu Val Glu Pro Phe Ala Ser Leu Thr Glu Ala Val Arg Ser
                         325                      335
Ser Val Pro Arg Leu Leu Ile Asn Arg Asp Leu Val Gly Pro Leu Ala
                340                      345                      350
Trp His Pro Arg Ser Arg Asp Val Ala Gln Leu Gly Asp Val Val His
           355                      360                      365
Gly Val Glu Ser Leu Val Glu Leu Leu Gly Trp Thr Glu Glu Met Arg
      370                      375                      380
Asp Leu Val Gln Arg Glu Thr Gly Lys Leu Asp Gly Pro Asp Lys
385                      390                      395
```

```
<210> 6297
<211> 472
<212> DNA
<213> Homo sapiens
```

```
<400> 6297
ngggccgct ggccgagagg ctgaggcggc gtcatgtcct ccgaggtgtc cgcgcgccgc
60
gacgccaaga agctggtgcg ctccccgagc ggcctgcgca tggtgcccga acaccgcgcc
120
ttcggaagcc cgttcggcct ggaggagccg cagtgggtcc cggacaagga gtgtcggaga
180
tgtatgcagt gtgacgccaa gtttgacttt ctcaccagaa agcaccactg tcgccgctgc
240
gggaagtgct tctgcgacag gtgctgcagc cagaaggtgc cgctgcggcg catgtgcttt
300
gtggaccccg tgcggcagtg cgcggagtgc gccctggtgt ccctcaagga ggcggagttc
360
tacgacaagc agctcaaagt gctcctgagc ggtaaggacg ggtgtcctgc acagtcctgc
420
gcgctccgcc agccggctcc tcgtgtctgt ggcgatgctg tgggctgtgc ac
472
```

```
<210> 6298
<211> 146
<212> PRT
<213> Homo sapiens
```

```
<400> 6298
Met Ser Ser Glu Val Ser Ala Arg Arg Asp Ala Lys Lys Leu Val Arg
 1                5                      10                      15
Ser Pro Ser Gly Leu Arg Met Val Pro Glu His Arg Ala Phe Gly Ser
                20                      25                      30
Pro Phe Gly Leu Glu Glu Pro Gln Trp Val Pro Asp Lys Glu Cys Arg
           35                      40                      45
Arg Cys Met Gln Cys Asp Ala Lys Phe Asp Phe Leu Thr Arg Lys His
      50                      55                      60
His Cys Arg Arg Cys Gly Lys Cys Phe Cys Asp Arg Cys Cys Ser Gln
65                      70                      75                      80
Lys Val Pro Leu Arg Arg Met Cys Phe Val Asp Pro Val Arg Gln Cys
                85                      90                      95
Ala Glu Cys Ala Leu Val Ser Leu Lys Glu Ala Glu Phe Tyr Asp Lys
```

```
                100                105                110
Gln Leu Lys Val Leu Leu Ser Gly Lys Asp Gly Cys Pro Ala Gln Ser
        115                120                125
Cys Ala Leu Arg Gln Pro Ala Pro Arg Val Cys Gly Asp Ala Val Gly
    130                135                140
Cys Ala
145
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<210> 6299
<211> 1466
<212> DNA
<213> Homo sapiens

<400> 6299
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120
ggcggccagc ccgcccattg gcccagggag agcctggttc tgtaccactg gacccagtcc
180
ttcagctcgc agaaggtgcg gctggtgatc gccgagaagg gcctggtgtg cgaggagcgg
240
gacgtgagcc tgccacagag cgagcacaag gagccctggt tcatgcggct caacctgggc
300
gaggaggtgc ccgtcatcat ccaccgcgac aacatcatca gtgactatga ccagatcatt
360
gactatgtgg agcgcacctt cacaggagag cacgtggtgg ccctgatgcc cgaggtgggc
420
agcctgcagc acgcacgggt gctgcagtac cggggagctgc tggacgcact gcccatggat
480
gcctacacgc atggctgcat cctgcatccc gagctcacca ccgactccat gatccccaag
540
tacgccacgg ccgagatccg cagacattta gccaatgcca ccacggacct catgaaactg
600
gaccatgaag aggagcccca gctctccgag ccctacctt ctaaacaaaa gaagctcatg
660
gccaagatct tggagcatga tgatgtgagc tacctgaaga agatcctcgg ggaactggcc
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960
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1020
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1080
tactttgcct actggtacct caagaaaaaa tacatctagg gccaggcctg gggcttggtg
1140
tctgactgtc ggtgtctctg tgctgtgtga ttccccgtga gctctcagta actcactgtc
1200
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tcatgaacac ttggacagcc ctccccgccc ttcgttctga gtaataatac cgtcagtgtg
1260
aaaacattcc gtagtttaga agtagacgtt gcaaatgctg tgactcaagg ccacggctct
1320
gctaaaagag agagaaggaa cgagagagag agagaaaaaa caaaaaacca gaaaaccacg
1380
aatgcctttt tctatcgatt tcaaggtctc aagatgggaa ctgtgggaga ctgggttagg
1440
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1466
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<210> 6300
<211> 372
<212> PRT
<213> Homo sapiens

<400> 6300
Leu Ile Pro Gly Cys His Gly Asp Pro Gln Gln Ser Asp Pro His Gln
1               5                   10                  15
Leu Gln Leu Val Ala His Leu Arg Ala Gly Glu Arg Cys Gly Gln Ala
                20                  25                  30
Ser Gly Gly Pro Arg Arg Ser Arg Gly Gly Gln Pro Ala His Trp Pro
        35                  40                  45
Arg Glu Ser Leu Val Leu Tyr His Trp Thr Gln Ser Phe Ser Ser Gln
    50                  55                  60
Lys Val Arg Leu Val Ile Ala Glu Lys Gly Leu Val Cys Glu Glu Arg
65                  70                  75                  80
Asp Val Ser Leu Pro Gln Ser Glu His Lys Glu Pro Trp Phe Met Arg
                85                  90                  95
Leu Asn Leu Gly Glu Glu Val Pro Val Ile Ile His Arg Asp Asn Ile
                100                 105                 110
Ile Ser Asp Tyr Asp Gln Ile Ile Asp Tyr Val Glu Arg Thr Phe Thr
        115                 120                 125
Gly Glu His Val Val Ala Leu Met Pro Glu Val Gly Ser Leu Gln His
    130                 135                 140
Ala Arg Val Leu Gln Tyr Arg Glu Leu Leu Asp Ala Leu Pro Met Asp
145                 150                 155                 160
Ala Tyr Thr His Gly Cys Ile Leu His Pro Glu Leu Thr Thr Asp Ser
                165                 170                 175
Met Ile Pro Lys Tyr Ala Thr Ala Gly Ile Arg Arg His Leu Ala Asn
                180                 185                 190
Ala Thr Thr Asp Leu Met Lys Leu Asp His Glu Glu Glu Pro Gln Leu
        195                 200                 205
Ser Glu Pro Tyr Leu Ser Lys Gln Lys Lys Leu Met Ala Lys Ile Leu
    210                 215                 220
Glu His Asp Asp Val Ser Tyr Leu Lys Lys Ile Leu Gly Glu Leu Ala
225                 230                 235                 240
Met Val Leu Asp Gln Ile Glu Ala Glu Leu Glu Lys Arg Lys Leu Glu
                245                 250                 255
Asn Glu Gly Gln Lys Cys Glu Leu Trp Leu Cys Gly Cys Ala Phe Thr
                260                 265                 270
Leu Ala Asp Val Leu Leu Gly Ala Thr Leu His Arg Leu Lys Phe Leu
        275                 280                 285
Gly Leu Ser Lys Lys Tyr Trp Glu Asp Gly Ser Arg Pro Asn Leu Gln
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     290                     295                     300
Ser Phe Phe Glu Arg Val Gln Arg Arg Phe Ala Phe Arg Lys Val Leu
305                     310                     315                 320
Gly Asp Ile His Thr Thr Leu Leu Ser Ala Val Ile Pro Asn Ala Phe
                    325                     330                 335
Arg Leu Val Lys Arg Lys Pro Pro Ser Phe Phe Gly Ala Ser Phe Leu
                340                     345                 350
Met Gly Ser Leu Gly Gly Met Gly Tyr Phe Ala Tyr Trp Tyr Leu Lys
            355                     360                 365
Lys Lys Tyr Ile
        370


<210> 6301
<211> 911
<212> DNA
<213> Homo sapiens

<400> 6301
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120
ccgaagctct cgctgactct gtccagctca gtgtctcgag ggaatgtgtc cactccccca
180
cgccacagca gtggaagcct tactcccccc gtgaccccac ccatcacccc ctcctcttca
240
ttccgcagca gcactccgac aggcagcgag tatgacgagg aggaggtgga ctatgaggag
300
tcggacagcg atgagtcctg gaccacagag agtgccatca gctccgaagc catcctcagc
360
tccatgtgca tgaatggagg ggaagagaag cctttgcct gcccagttcc tggatgtaaa
420
aagagataca agaatgtgaa tggcataaag tatcacgcta agaatggtca cagaacacag
480
attcgtgtcc gcaaaccatt caagtgtcgc tgtgggaaga gttacaagac agctcagggc
540
ctgcggcacc acacaatcaa tttccatccc ccggtgtcgg ctgagattat caggaagatg
600
cagcaataac atgctggtca taactgtgcc aagaaatcct caccagcagt tgctgatttt
660
gaaaacagcc accttttttc aggggaagca ttcagcaacc ctttaaagaa aaagaattaa
720
atgcatgctt taaatttttt ctgtaatttt ggaatgatgt atctttgtag agttaatgat
780
tttgtacatt tgcacatgta atcatcatac ccattttcat tactttgata taaggtgcta
840
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900
atgttgcaaa a
911


<210> 6302
<211> 202
<212> PRT
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<213> Homo sapiens

<400> 6302
Xaa Arg Val Leu Glu Lys Gln Glu Leu Gln Gln Pro Thr Tyr Val Ala
1   5   10   15
Leu Ser Tyr Ile Asn Arg Phe Met Thr Asp Ala Ala Arg Arg Glu Gln
            20   25   30
Glu Ser Leu Lys Lys Lys Ile Gln Pro Lys Leu Ser Leu Thr Leu Ser
        35   40   45
Ser Ser Val Ser Arg Gly Asn Val Ser Thr Pro Pro Arg His Ser Ser
    50   55   60
Gly Ser Leu Thr Pro Pro Val Thr Pro Pro Ile Thr Pro Ser Ser Ser
65   70   75   80
Phe Arg Ser Ser Thr Pro Thr Gly Ser Glu Tyr Asp Glu Glu Glu Val
                85   90   95
Asp Tyr Glu Glu Ser Asp Ser Asp Glu Ser Trp Thr Thr Glu Ser Ala
            100   105   110
Ile Ser Ser Glu Ala Ile Leu Ser Ser Met Cys Met Asn Gly Gly Glu
        115   120   125
Glu Lys Pro Phe Ala Cys Pro Val Pro Gly Cys Lys Lys Arg Tyr Lys
    130   135   140
Asn Val Asn Gly Ile Lys Tyr His Ala Lys Asn Gly His Arg Thr Gln
145   150   155   160
Ile Arg Val Arg Lys Pro Phe Lys Cys Arg Cys Gly Lys Ser Tyr Lys
                165   170   175
Thr Ala Gln Gly Leu Arg His His Thr Ile Asn Phe His Pro Pro Val
            180   185   190
Ser Ala Glu Ile Ile Arg Lys Met Gln Gln
        195   200

<210> 6303
<211> 676
<212> DNA
<213> Homo sapiens

<400> 6303
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120
gctgaaacaa tgagaatagt gctggaacgc tgctacaatg atttgcgtct tctcagtgtc
180
tccagtaaaa ccctgaaagc tgaaggattt tttagaagta acaaggtgtt tgttgaaagc
240
tccgagactt tggattacca gatggccttt gcagactctc atttatggaa actcctggat
300
cggcatgcaa atacaatcag attatttgtt ttgctacctg aacaatcccc agtatcttat
360
tccaaaagga cagcatacca gaaagctgga ggcgattctg gtaatgtgga tgatgactgt
420
gaaagagtca aaggacctgt aggaagccta agtctgtggg aagctattct agaagaaagc
480
actgaaaaac tcaaaagctt gtcactgcag caacagcagg atgggagataa tggggacagc
540

agcaaaagta ctgagacaag tgactttgaa aacatcgaat cacctctcaa tgagagggac
600
tcttcagcat cagtggataa tagagaactt gaacagcata ttcagacttc tgatccagaa
660
aaattttcag tctgaa
676

<210> 6304
<211> 181
<212> PRT
<213> Homo sapiens

<400> 6304
Met Arg Ile Val Leu Glu Arg Cys Tyr Asn Asp Leu Arg Leu Leu Ser
1   5   10   15
Val Ser Ser Lys Thr Leu Lys Ala Glu Gly Phe Phe Arg Ser Asn Lys
            20   25   30
Val Phe Val Glu Ser Ser Glu Thr Leu Asp Tyr Gln Met Ala Phe Ala
        35   40   45
Asp Ser His Leu Trp Lys Leu Leu Asp Arg His Ala Asn Thr Ile Arg
    50   55   60
Leu Phe Val Leu Leu Pro Glu Gln Ser Pro Val Ser Tyr Ser Lys Arg
65   70   75   80
Thr Ala Tyr Gln Lys Ala Gly Gly Asp Ser Gly Asn Val Asp Asp Asp
                85   90   95
Cys Glu Arg Val Lys Gly Pro Val Gly Ser Leu Lys Ser Ser Val Glu Ala
            100   105   110
Ile Leu Glu Glu Ser Thr Glu Lys Leu Lys Ser Leu Ser Leu Gln Gln
        115   120   125
Gln Gln Asp Gly Asp Asn Gly Asp Ser Ser Lys Ser Thr Glu Thr Ser
    130   135   140
Asp Phe Glu Asn Ile Glu Ser Pro Leu Asn Glu Arg Asp Ser Ser Ala
145   150   155   160
Ser Val Asp Asn Arg Glu Leu Glu Gln His Ile Gln Thr Ser Asp Pro
                165   170   175
Glu Lys Phe Ser Val
            180

<210> 6305
<211> 3853
<212> DNA
<213> Homo sapiens

<400> 6305
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cggcggcggc gcctcaggca cctcggcccg gacacgatga ggcgagtggt ccggcagagc
120
aaattccggc atgtgttcgg gcagccggtc aagaacgacc agtgctatga ggacattcgc
180
gtgtcccgtg ttacctggga cagcaccttc tgcgccgtca accccaagtt cctggcggtg
240
attgtggagg ccagtggagg gggtgccttt ctggtgctcc ccctaagcaa gacgggccgc
300

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attgacaagg cctaccctac agtatgtggg cacacaggac cagtgctgga catcgactgg
360
tgcccacata acgatcaggt cattgccagc ggttcagagg actgcacggt catggtatgg
420
cagatcccag aaaatggact cacctccccg ctgacagagc cggtggtggt actggagggg
480
cacaccaagc gagtgggcat catcgcctgg caccccacgg cccgaaacgt gctgctcagt
540
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600
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660
ttttgctcag catgcaagga caagagcgtg cgcatcatcg accccgtcg gggcaccctg
720
gtggcagagc gggagaaggc tcatgagggg gcccgggccca tgcgggccat cttcctggca
780
gatgcaagg tgttcaccac aggcttcagc cgaatgagcg agcggcagct ggcgctctgg
840
aatccgaaaa atatgcagga accaattgct cttcatgaga tggacactag caatgggtg
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960
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1620
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1680
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1740
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1800
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gcccaagtac cctttttttt ttaatgaata gggaccaatg ccacattgct tttatattt
1920
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2100
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2160
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2220
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3420
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3480
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3540
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tcaaagagaa gcaggagggc aagggaaagt taccctgatc ttagtttgta gcttatgact
3600
tatttaatga atggatgccc agccaagctc agagtaggcg cccaaagcat tgtggattat
3660
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3720
gaattactcc taggtcggct cttatagagt ggccatagtg ttctgtcaaa acacttgctt
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3840
aaaaaaaaaa aaa
3853


<210> 6306
<211> 474
<212> PRT
<213> Homo sapiens

<400> 6306
Met Arg Arg Val Val Arg Gln Ser Lys Phe Arg His Val Phe Gly Gln
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Pro Val Lys Asn Asp Gln Cys Tyr Glu Asp Ile Arg Val Ser Arg Val
            20                  25                  30
Thr Trp Asp Ser Thr Phe Cys Ala Val Asn Pro Lys Phe Leu Ala Val
        35                  40                  45
Ile Val Glu Ala Ser Gly Gly Gly Ala Phe Leu Val Leu Pro Leu Ser
    50                  55                  60
Lys Thr Gly Arg Ile Asp Lys Ala Tyr Pro Thr Val Cys Gly His Thr
65                  70                  75                  80
Gly Pro Val Leu Asp Ile Asp Trp Cys Pro His Asn Asp Gln Val Ile
                85                  90                  95
Ala Ser Gly Ser Glu Asp Cys Thr Val Met Val Trp Gln Ile Pro Glu
            100                 105                 110
Asn Gly Leu Thr Ser Pro Leu Thr Glu Pro Val Val Val Leu Glu Gly
        115                 120                 125
His Thr Lys Arg Val Gly Ile Ile Ala Trp His Pro Thr Ala Arg Asn
    130                 135                 140
Val Leu Leu Ser Ala Gly Cys Asp Asn Val Val Leu Ile Trp Asn Val
145                 150                 155                 160
Gly Thr Ala Glu Glu Leu Tyr Arg Leu Asp Ser Leu His Pro Asp Leu
                165                 170                 175
Ile Tyr Asn Val Ser Trp Asn His Asn Gly Ser Leu Phe Cys Ser Ala
            180                 185                 190
Cys Lys Asp Lys Ser Val Arg Ile Ile Asp Pro Arg Arg Gly Thr Leu
        195                 200                 205
Val Ala Glu Arg Glu Lys Ala His Glu Gly Ala Arg Pro Met Arg Ala
    210                 215                 220
Ile Phe Leu Ala Asp Gly Lys Val Phe Thr Thr Gly Phe Ser Arg Met
225                 230                 235                 240
Ser Glu Arg Gln Leu Ala Leu Trp Asn Pro Lys Asn Met Gln Glu Pro
                245                 250                 255
Ile Ala Leu His Glu Met Asp Thr Ser Asn Gly Val Leu Leu Pro Phe
            260                 265                 270
Tyr Asp Pro Asp Thr Ser Ile Ile Tyr Leu Cys Gly Lys Gly Asp Ser
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         275                    280                    285
Ser Ile Arg Tyr Phe Glu Ile Thr Asp Glu Ser Pro Tyr Val His Tyr
     290                    295                    300
Leu Asn Thr Phe Ser Ser Lys Glu Pro Gln Arg Gly Met Gly Tyr Met
305                    310                    315                    320
Pro Lys Arg Gly Leu Asp Val Asn Lys Cys Glu Ile Ala Arg Phe Phe
                325                    330                    335
Lys Leu His Glu Arg Lys Cys Glu Pro Ile Ile Met Thr Val Pro Arg
                340                    345                    350
Lys Ser Asp Leu Phe Gln Asp Asp Leu Tyr Pro Asp Thr Ala Gly Pro
                355                    360                    365
Glu Ala Ala Leu Glu Ala Glu Glu Trp Phe Glu Gly Lys Asn Ala Asp
     370                    375                    380
Pro Ile Leu Ile Ser Leu Lys His Gly Tyr Ile Pro Gly Lys Asn Arg
385                    390                    395                    400
Asp Leu Lys Val Val Lys Lys Asn Ile Leu Asp Ser Lys Pro Thr Ala
                405                    410                    415
Asn Lys Lys Cys Asp Leu Ile Ser Ile Pro Lys Lys Thr Thr Asp Thr
                420                    425                    430
Ala Ser Val Gln Asn Glu Ala Lys Leu Asp Glu Ile Leu Lys Glu Ile
     435                    440                    445
Lys Ser Ile Lys Asp Thr Ile Cys Asn Gln Asp Glu Arg Ile Ser Lys
     450                    455                    460
Leu Glu Gln Gln Met Ala Lys Ile Ala Ala
465                    470
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<210> 6307
<211> 2119
<212> DNA
<213> Homo sapiens

<400> 6307
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120
acttggctct gacgcggcgc cccagcccgg ctgtgtcccc ggcgcccggg accaccctcc
180
ctgccggctt tgggtgcgtt gtggggtccc gaggattcgc gagatttgtt gaaagacatt
240
caagattacg aagtttagat gaccaaaatg gatatccgag gtgctgtgga tgctgctgtc
300
cccaccaata ttattgctgc caaggctgca gaagttcgtg caaacaaagt caactggcaa
360
tcctatcttc agggacagat gatttctgct gaagattgtg agtttattca gaggtttgaa
420
atgaaacgaa gccctgaaga gaagcaagag atgcttcaaa ctgaaggcag ccagtgtgct
480
aaaacattta taaatctgat gactcatatc tgcaaagaac agaccgttca gtatatacta
540
actatggtgg atgatatgct gcaggaaaat catcagcgtg ttagcatttt ctttgactat
600
gcaagatgta gcaagaacac tgcgtggccc tactttctgc caatgttgaa tcgccaggat
660
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ccccttcactg ttcatatggc agcaagaatt attgccaagt tagcagcttg gggaaaagaa
720
ctgatggaag gcagtgactt aaattactat ttcaattgga taaaaactca gctgagttca
780
cagaaactgc gtggtagcgg tgttgctgtt gaaacaggaa cagtctcttc aagtgatagt
840
tcgcagtatg tgcagtgcgt ggccgggtgt ttgcagctga tgctccgggt caatgagtac
900
cgctttgctt gggtggaagc agatggggta aattgcataa tgggagtgtt gagtaacaag
960
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1020
caaatgtgtg aacacctgcg gcgctataat atcattccag ttctgtctga tatccttcag
1080
gagtctgtca aagagaaagt aacaagaatc attcttgcag catttcgtaa cttttttagaa
1140
aaatcaactg aaagagaaac tcgccaagaa tatgccctgg ctatgattca gtgcaaagtt
1200
ctgaaacagt tggagaactt ggaacagcag aagtacgatg atgaagatat cagcgaagat
1260
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1320
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1380
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1440
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1500
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1620
gccgtgcaga agctcatggt gcacaactgg gaataccttg gcaagcagct ccagtccgag
1680
cagccccaga ccgctgccgc ccgaagctaa gcctgcctct ggccttcccc tccgcctcaa
1740
tgcagaacca gtagtgggag cactgtgttt agagttaaga gtgaacactg tttgattttta
1800
cttggaattt cctctgttat atagcttttc ccaatgctaa tttccaaaca acaacaacaa
1860
aataacatgt ttgcctgtta agttgtataa aagtaggtga ttctgtattt aaagaaaata
1920
ttactgttac atatactgct tgcaatttct gtatttattg ttctctggaa ataaatatag
1980
ttattaaagg attctcactc caaacatggc ctctctcttt acttggactt tgaacaaaag
2040
tcaactgttg tctcttttca aaccaaattg ggagaattgt tgcaaagtag tgaatggcaa
2100
ataaatgttt taaaatcta
2119
```

```
<210> 6308
<211> 483
<212> PRT
```

<213> Homo sapiens

<400> 6308

```
Met Thr Lys Met Asp Ile Arg Gly Ala Val Asp Ala Ala Val Pro Thr
1               5                   10                  15
Asn Ile Ile Ala Ala Lys Ala Ala Glu Val Arg Ala Asn Lys Val Asn
            20                  25                  30
Trp Gln Ser Tyr Leu Gln Gly Gln Met Ile Ser Ala Glu Asp Cys Glu
        35                  40                  45
Phe Ile Gln Arg Phe Glu Met Lys Arg Ser Pro Glu Gln Lys Gln Glu
    50                  55                  60
Met Leu Gln Thr Glu Gly Ser Gln Cys Ala Lys Thr Phe Ile Asn Leu
65                  70                  75                  80
Met Thr His Ile Cys Lys Glu Gln Thr Val Gln Tyr Ile Leu Thr Met
            85                  90                  95
Val Asp Asp Met Leu Gln Glu Asn His Gln Arg Val Ser Ile Phe Phe
            100                 105                 110
Asp Tyr Ala Arg Cys Ser Lys Asn Thr Ala Trp Pro Tyr Phe Leu Pro
    115                 120                 125
Met Leu Asn Arg Gln Asp Pro Phe Thr Val His Met Ala Ala Arg Ile
    130                 135                 140
Ile Ala Lys Leu Ala Ala Trp Gly Lys Glu Leu Met Glu Gly Ser Asp
145                 150                 155                 160
Leu Asn Tyr Tyr Phe Asn Trp Ile Lys Thr Gln Leu Ser Ser Gln Lys
                165                 170                 175
Leu Arg Gly Ser Gly Val Ala Val Glu Thr Gly Thr Val Ser Ser Ser
            180                 185                 190
Asp Ser Ser Gln Tyr Val Gln Cys Ser Val Ala Gly Cys Leu Gln Leu Met
    195                 200                 205
Leu Arg Val Asn Glu Tyr Arg Phe Ala Trp Val Glu Ala Asp Gly Val
    210                 215                 220
Asn Cys Ile Met Gly Val Leu Ser Asn Lys Cys Gly Phe Gln Leu Gln
225                 230                 235                 240
Tyr Gln Met Ile Phe Ser Ile Trp Leu Leu Ala Phe Ser Pro Gln Met
                245                 250                 255
Cys Glu His Leu Arg Arg Tyr Asn Ile Ile Pro Val Leu Ser Asp Ile
    260                 265                 270
Leu Gln Glu Ser Val Lys Glu Lys Val Thr Arg Ile Ile Leu Ala Ala
    275                 280                 285
Phe Arg Asn Phe Leu Glu Lys Ser Thr Glu Arg Glu Thr Arg Gln Glu
    290                 295                 300
Tyr Ala Leu Ala Met Ile Gln Cys Lys Val Leu Lys Gln Leu Glu Asn
305                 310                 315                 320
Leu Glu Gln Gln Lys Tyr Asp Asp Glu Gly Ile Ser Glu Asp Ile Lys
            325                 330                 335
Phe Leu Leu Glu Lys Leu Gly Glu Ser Val Gln Asp Leu Ser Ser Phe
            340                 345                 350
Asp Glu Tyr Ser Ser Glu Leu Lys Ser Gly Arg Leu Glu Trp Ser Pro
    355                 360                 365
Val His Lys Ser Glu Lys Phe Trp Arg Glu Asn Ala Val Arg Leu Asn
    370                 375                 380
Glu Lys Asn Tyr Glu Leu Leu Lys Ile Leu Thr Lys Leu Leu Glu Val
385                 390                 395                 400
Ser Asp Asp Pro Gln Val Leu Ala Val Ala Ala His Asp Val Gly Glu
```

```
                     405                    410                   415
Tyr Val Arg His Tyr Pro Arg Gly Lys Arg Val Ile Glu Gln Leu Gly
                 420                   425                   430
Gly Lys Gln Leu Val Met Asn His Met His His Glu Asp Gln Gln Val
         435                   440                   445
Arg Tyr Asn Ala Leu Leu Ala Val Gln Lys Leu Met Val His Asn Trp
     450                   455                   460
Glu Tyr Leu Gly Lys Gln Leu Gln Ser Glu Gln Pro Gln Thr Ala Ala
465                   470                   475                   480
Ala Arg Ser
```

<210> 6309
<211> 564
<212> DNA
<213> Homo sapiens

<400> 6309
cggccgcagc gttcacggtg acatcgcaaa aggcgagggg gagacgcgcc cgcgggaccc
60
cttcccggtg tgctcccacg tggcgtcgac cgggaagaag gggccggtag ggagcccttc
120
ccaggcgcct cccacggggt tcccccgcag ccgcgacacc accaacagtc gccgcaaccg
180
ccgcgtggaa cagacgaccc gggtctcaaa gaggcggcgc gggcgggacg cagcccctgg
240
tccatctcgg gcgccgcctg atgcactcct actgcgcccg ggtcctcccg gcctgtctca
300
ctttgggggg ctcagggtcc tcacggggga cgcctgcacg taagccagga cggcgttctg
360
caggaagctc gccctctggg cctcctcgtc ccggatgcgg gcgatctccg cctcccggag
420
ccgcagcttc tcccggagag acgcgttctc gctctccctg tccagcagcg cgatctgagc
480
tcactggaac ctccacctcc caggttcgag tgattctcct gcctcagcct cctgagtagc
540
tggtattaca gggtgccacc acta
564

<210> 6310
<211> 83
<212> PRT
<213> Homo sapiens

<400> 6310
```
Cys Thr Pro Thr Ala Pro Gly Ser Ser Arg Pro Val Ser Leu Trp Gly
1                   5                   10                  15
Ala Gln Gly Pro His Gly Gly Arg Leu His Val Ser Gln Asp Gly Val
                20                  25                  30
Leu Gln Glu Ala Arg Pro Leu Gly Leu Leu Val Pro Asp Ala Gly Asp
        35                  40                  45
Leu Arg Leu Pro Glu Gln Glu Leu Leu Pro Glu Arg Arg Val Leu Ala
    50                  55                  60
Leu Pro Val Gln Gln Arg Asp Leu Ser Ser Leu Glu Pro Pro Pro Pro
```

```
65                    70              75                80
Arg Phe Glu


<210> 6311
<211> 1548
<212> DNA
<213> Homo sapiens

<400> 6311
nggtttggca agagaccaac ctcagctcag actttccatc tgagcacagc cgtttggcta
60
tgagctttt actgaatttt atagcaactc tgatttcttc cttttaaatga ttggaggctt
120
tttaaagatc ttatgggct caaatactaa cttcataaat ggcctttga ataacagcag
180
caaataatct ctcagctgat atttcaattt actaaggaag cacaaattaa aacattcctg
240
ctacacagtc atgggctggc acatgtctgg ttggatgaat acaaggagca gtattttcc
300
ttaagacctg acctgaagac gaaaagctat ggcaatatca gtgagcgtgt ggaactgaga
360
aagaagttgg gctgtaaatc atttaaatgg tatttggata atgtataccc agagatgcag
420
atatctgggt cccacgccaa accccaacaa cccatttttg tcaatagagg gccaaaacga
480
cccaaagtcc ttcaacgtgg aaggctctat cacctccaga ccaacaaatg cctggtggcc
540
cagggccgcc caagtcagaa gggaggtctc gtggtgctta aggcctgtga ctacagtgac
600
ccaaatcaga tctggatcta taatgaagag catgaattgg ttttaaatag tctccttgt
660
ctagatatgt cagagactcg ctcatcagac ccgccacggc tcatgaaatg ccacgggtca
720
ggaggatccc agcagtggac ctttgggaaa aacaatcggc tataccaggt gtcggttgga
780
cagtgcctga gagcagtgga tcccctgggt cagaagggct ctgtcgccat ggcgatctgc
840
gatggctcct cttcacagca gtggcatttg gaaggttaag gtggatgctg tggcgggaac
900
gttgcttcat caggcgttgc ctccggtgtg gagtttgggg ctttaggaaa gcctgggttg
960
ggtggagcag aaccatcttg gagaagatga cagttccctg tcctcccgga gatgcctggg
1020
tgtgttagca gaggtgacac gtgtctgaca gagacgggag ctctgagtgt ccacgggtga
1080
agaagtgagt gtccacgggt gaagaagtga gtatgtttca cctggacatt aaggtgatgt
1140
ttgagctgct gttaaggaat ttcttgctta tagaggcaaa ccacagtatc attttaactc
1200
tagaattggg cttgtacaga aggataaaac ccaggaaaat ggatatttct attcagattt
1260
atttatgcct ctttttaatc ccctttaatg atgcagtggt ttttatctga tcaggaactt
1320
```

```
gtcatgattt cctttcttag acttcatagg agatagtgct ttaaaaaaaa aaaaacttct
1380
attatttgtt tagtatgttg taagtagatc attttaaaaa actgaatcta tattatgttt
1440
aacttcagaa ggcatcattt ataagacagt atggcagtta attataaaat tattttgatg
1500
aattatgata caatctcact aataaagaat cctttttgatt aaaaaaaa
1548
```

```
<210> 6312
<211> 234
<212> PRT
<213> Homo sapiens
```

```
<400> 6312
Gln Gln Gln Ile Ile Ser Gln Leu Ile Phe Gln Phe Thr Lys Glu Ala
1               5                   10                  15
Gln Ile Lys Thr Phe Leu Leu His Ser His Gly Leu Ala His Val Trp
            20                  25                  30
Leu Asp Glu Tyr Lys Glu Gln Tyr Phe Ser Leu Arg Pro Asp Leu Lys
        35                  40                  45
Thr Lys Ser Tyr Gly Asn Ile Ser Glu Arg Val Glu Leu Arg Lys Lys
    50                  55                  60
Leu Gly Cys Lys Ser Phe Lys Trp Tyr Leu Asp Asn Val Tyr Pro Glu
65                  70                  75                  80
Met Gln Ile Ser Gly Ser His Ala Lys Pro Gln Gln Pro Ile Phe Val
                85                  90                  95
Asn Arg Gly Pro Lys Arg Pro Lys Val Leu Gln Arg Gly Arg Gly Leu Tyr
            100                 105                 110
His Leu Gln Thr Asn Lys Cys Leu Val Ala Gln Gly Arg Pro Ser Gln
        115                 120                 125
Lys Gly Gly Leu Val Val Leu Lys Ala Cys Asp Tyr Ser Asp Pro Asn
    130                 135                 140
Gln Ile Trp Ile Tyr Asn Glu Glu His Glu Leu Val Leu Asn Ser Leu
145                 150                 155                 160
Leu Cys Leu Asp Met Ser Glu Thr Arg Ser Ser Asp Pro Pro Arg Leu
                165                 170                 175
Met Lys Cys His Gly Ser Gly Gly Ser Gln Gln Trp Thr Phe Gly Lys
            180                 185                 190
Asn Asn Arg Leu Tyr Gln Val Ser Val Gly Gln Cys Leu Arg Ala Val
        195                 200                 205
Asp Pro Leu Gly Gln Lys Gly Ser Val Ala Met Ala Ile Cys Asp Gly
    210                 215                 220
Ser Ser Ser Gln Gln Trp His Leu Glu Gly
225                 230
```

```
<210> 6313
<211> 725
<212> DNA
<213> Homo sapiens
```

```
<400> 6313
ttttttttt tttttttttt ttttttttg gtaattaaca taatttatta cgcaaaaaat
60
```

```
gagaaaatat acagcaggag ggatgaggag tacacatagg aaatttctgt gattttcttc
120
attttgatcg tattgctttc ttgtcttcag gagggaagat ttcgacttca aaagtaacaa
180
aatatttaag aagagaattc acatctttct gttctagctg gtattcttgc attattttct
240
cagcagtcca ggtttctggg aaaagcttat gattattgag aagtgtcaat gcttctacaa
300
tggaaatttt gcctttggga atgctcttaa tatttatcat atcaaaatga tggtctttcg
360
gcaatcgaa ttccttcggc tcttgacatg tttcagcagc ttttacctgc aaggaagaca
420
caggatcttt ggaatcaaca tacacatctt ttagaaacga cagcagcttt tcatctttac
480
gagcaatctc tcctttaact tctggataga gactaatctg ctctcgcagg aggctgttgg
540
tagaggggtg tctgggagcg acagagggct tcatcttgct gatttcccgt tccgctcggt
600
tctctaggtt gaaattcctg ataccgcgaa tcactagtgc tcccatctcc tcataacatt
660
atgcgctcag gttcaggccg cacgtgggaa caccggcgca ggacaactct cgggacaccc
720
ggagc
725
```

<400> 6314

```
Met Gly Ala Leu Val Ile Arg Gly Ile Arg Asn Phe Asn Leu Glu Asn
1               5                   10                  15
Arg Ala Glu Arg Glu Ile Ser Lys Met Lys Pro Ser Val Ala Pro Arg
        20                  25                  30
His Pro Ser Thr Asn Ser Leu Leu Arg Glu Gln Ile Ser Leu Tyr Pro
        35                  40                  45
Glu Val Lys Gly Glu Ile Ala Arg Lys Asp Glu Lys Leu Leu Ser Phe
    50                  55                  60
Leu Lys Asp Val Tyr Val Asp Ser Lys Asp Pro Val Ser Ser Leu Gln
65                  70                  75                  80
Val Lys Ala Ala Glu Thr Cys Gln Glu Pro Lys Glu Phe Arg Leu Pro
                85                  90                  95
Lys Asp His His Phe Asp Met Ile Asn Ile Lys Ser Ile Pro Lys Gly
        100                 105                 110
Lys Ile Ser Ile Val Glu Ala Leu Thr Leu Leu Asn Asn His Lys Leu
        115                 120                 125
Phe Pro Glu Thr Trp Thr Ala Glu Lys Ile Met Gln Glu Tyr Gln Leu
        130                 135                 140
Glu Gln Lys Asp Val Asn Ser Leu Leu Lys Tyr Phe Val Thr Phe Glu
145                 150                 155                 160
Val Glu Ile Phe Pro Pro Glu Asp Lys Lys Ala Ile Arg Ser Lys
                165                 170                 175
```

<210> 6315
<211> 378
<212> DNA
<213> Homo sapiens

<400> 6315
caagaatcca ttgaagccag caagactgca ctttgtcctg aaagatttgt acccctaagt
60
gctcaaaaca gaaaacttgt ggaggccata aaacaaggtc acattcctga gctccaggag
120
tatgtaaaat ataaatatgc aatggatgaa gctgatgaaa aaggatggtt tccattgcat
180
gaagctgttg ttcaacccat tcaacaaata cttgagattg ttctggatgc atcctataag
240
acactctggg aattcaagac ctgtgatgga gaaacaccct tgactttggc agtcaaagct
300
ggtctggtgg aaaatgtaag aactttatta gaaaagggag tgtggcccaa cacaaaaaat
360
gataaggag agacccccc
378

<210> 6316
<211> 126
<212> PRT
<213> Homo sapiens

<400> 6316
Gln Glu Ser Ile Glu Ala Ser Lys Thr Ala Leu Cys Pro Glu Arg Phe
 1   5   10   15
Val Pro Leu Ser Ala Gln Asn Arg Lys Leu Val Glu Ala Ile Lys Gln
            20   25   30
Gly His Ile Pro Glu Leu Gln Glu Tyr Val Lys Tyr Lys Tyr Ala Met
        35   40   45
Asp Glu Ala Asp Glu Lys Gly Trp Phe Pro Leu His Glu Ala Val Val
    50   55   60
Gln Pro Ile Gln Gln Ile Leu Glu Ile Val Leu Asp Ala Ser Tyr Lys
65   70   75   80
Thr Leu Trp Glu Phe Lys Thr Cys Asp Gly Glu Thr Pro Leu Thr Leu
                85   90   95
Ala Val Lys Ala Gly Leu Val Glu Asn Val Arg Thr Leu Leu Glu Lys
            100   105   110
Gly Val Trp Pro Asn Thr Lys Asn Asp Lys Gly Glu Thr Pro
        115   120   125

<210> 6317
<211> 1201
<212> DNA
<213> Homo sapiens

<400> 6317
nngggcccag aactacaact ctgcagcgaa agatagagat gcccttgaaa atgtgtcaca
60
ttcttaagat gtcttgccga agtagcaaga gcggagggtg actgtgtgag caggagcgag
120

```
agggcgccag ctcctgcggg ggaggttcct actgcgcgcc ccaccctgtg caagaatgtc
180
aggctttagg gcagctgcca taggccccag gggcatcagg actctgcctc tgaaccagag
240
ctgctttccc gactaacttc aatctggaga gatggtaagt tatctaaccg gctcttcttt
300
tggcgagact gctctttctc cttaatcaga gcccccatg ccctttgcag ctcagagtcg
360
tcttcctcag cgccaggcac cctgtgatcc actttcttcg tattcttttc tttggtcttg
420
ggtgcagttc ctaggcgagt ccataaatta cctgatttct tctcccgagt atcggcgtag
480
aggcctttac tatcctgcct gggaacacct agcctactat gcacatcaga agagggctct
540
ctccgaacga cggggttact actaaaagcc ttttccggag aatgtggtct ttttcctaac
600
cgctggcgta tatctgattt agtactgctg actggtggcc gtggacggga gtgctgacgt
660
ttctcatcta atagatgtcg gacatctgca aatttctcag gtggtaattt gttaccaatt
720
cggttttga tattgcttga agatacacta tctgccctca tggagttcct aatattttc
780
aactgagatt ccacttcgtc agcatacata gtcattttca tgctttctt tggtgaaggc
840
gtggaaatca ttttcagttc tagatcatag tccatttcat ctgagtctga gctgctggca
900
ctggatcgtc tagacgcgct ccgctcccgg ggctgcttga gagccgggag ctcctcgtgg
960
tactctacca ccactctgtc atctgcatcc atgtcctggt cttcttcttc ctcttcctct
1020
tcctcctcct cctcctcttc ctcctcttca atgggttcct cgggaacatt cactagccca
1080
gaatgtcgat gtttatacga cgtcaagcca acgtcatccc caatcagggc tctcttcttg
1140
atcacgtccc gctgaatacg acgggaatga tatcttcgct tccatgaatt gctaagaatt
1200
c
1201
```

```
<210> 6318
<211> 94
<212> PRT
<213> Homo sapiens
```

```
<400> 6318
Ser Ile Ser Ser Glu Ser Glu Leu Leu Ala Leu Asp Arg Leu Asp Ala
1               5                   10                  15
Leu Arg Ser Arg Gly Cys Leu Arg Ala Gly Ser Ser Ser Trp Tyr Ser
            20                  25                  30
Thr Thr Thr Leu Ser Ser Ala Ser Met Ser Trp Ser Ser Ser Ser Ser
        35                  40                  45
Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Ser Met Gly Ser Ser
    50                  55                  60
Gly Thr Phe Thr Ser Pro Glu Cys Arg Cys Leu Tyr Asp Val Lys Pro
```

```
65                    70                    75                    80
Thr Ser Ser Pro Ile Arg Ala Leu Phe Leu Ile Thr Ser Arg
                    85                    90
```

```
<210> 6319
<211> 345
<212> DNA
<213> Homo sapiens
```

```
<400> 6319
gcgccgccgc tgtgggccgc ctccgcagcc ggccacctgg acgtggtgcg gagcctgctg
60
cgccgcgggg cctcggtgaa ccgcaccacg cgcaccaact ccacgcctct ccgcgcgcc
120
tgcttcgacg gccacctgga ggtggtgcgc tacctggtcg gcgagcacca ggccgacctg
180
gaggtggcca accggcacgg ccacacgtgc ctcatgatct cgtgctacaa gggccaccgt
240
gagatcgccc gctacctgct ggagcagggc gcccaggtga accggcgcag cgccaagggc
300
aacacggccc tgcatgactg cgccgagtcc ggcagcctgg agatc
345
```

```
<210> 6320
<211> 115
<212> PRT
<213> Homo sapiens
```

```
<400> 6320
Ala Pro Pro Leu Trp Ala Ala Ser Ala Ala Gly His Leu Asp Val Val
1                    5                    10                    15
Arg Ser Leu Leu Arg Arg Gly Ala Ser Val Asn Arg Thr Thr Arg Thr
                    20                    25                    30
Asn Ser Thr Pro Leu Arg Ala Ala Cys Phe Asp Gly His Leu Glu Val
        35                    40                    45
Val Arg Tyr Leu Val Gly Glu His Gln Ala Asp Leu Glu Val Ala Asn
    50                    55                    60
Arg His Gly His Thr Cys Leu Met Ile Ser Cys Tyr Lys Gly His Arg
65                    70                    75                    80
Glu Ile Ala Arg Tyr Leu Leu Glu Gln Gly Ala Gln Val Asn Arg Arg
                    85                    90                    95
Ser Ala Lys Gly Asn Thr Ala Leu His Asp Cys Ala Glu Ser Gly Ser
            100                    105                    110
Leu Glu Ile
        115
```

```
<210> 6321
<211> 1442
<212> DNA
<213> Homo sapiens
```

```
<400> 6321
aagctttgcc agagtggttt ggctacagtc agctcttcta caggaagtgg cattttccac
60
```

```
ttgtgaaacg gtaggtcatt ccctgcctca tgcagaactc agccctgtgg agctccacca
120
cctggcccag gccctgccca catgcaacct cccggggtgg ccctcaatga cctgcacgtc
180
ccttcactct aaggaaccct gagttacagt ggccttaagg acatgtgtat ttagaagcct
240
ttgtgtacaa actagctctg tgcgctctca gtttaccgtc ctcacacttt attgttagct
300
gttctttaag tttctcacac attattggca attatgtaaa aatcaagaac ctctataaaa
360
caacctggct ttccaggtgg aattccgcat acagccaaaa ctggattcca gtgtggccag
420
acaacgccca tgtcccaatt taagagtcgc tgtcctcacc accatccgga gtggcctctc
480
tgtcagtgtg tgatgtggcc agggcagtgt ccacctgaac ttcctcctca tcggactgaa
540
caacgggga ctccccaccc tcactgatgt cccgggtggc cgagtcggtg caggtggagg
600
aagaagaagg tggcttggct cttaattctg agggatttgg aacctggagg gtaatctcat
660
tctgacaggt actggattca ggccctaagg cgggggacag cacagtgttc tcttctcctc
720
cagagttcag gaagacgtcc agggcctcct ggtccgatat gtccatcagg tccatctgct
780
ccagcatgtc cacgttcact tccatggatg acatgctgcc tatgggctct cgccgctctg
840
caatctgcag gtagccagtg gacaggtact gctgctccat gtcctgctgg aaggcttcct
900
caaaaaactt ctgccgctcc ttcagcttca tttgctgggt gtgctccatt tccaggacct
960
tctgggcgtg ctctgcatct agttcagagg gatccctctg actattttcg gtgagtcctg
1020
gagatgacat ggatgtgaga cctgaatgag tgaacagaag ctcagtgctg gtcaagtgaa
1080
gcctccagtt accaggcagc tgccctcacg tgcatcttct gggatgtaga acaaaggaag
1140
tgaggctgaa gccagaagca ggttttttcca aagaaattgt agtaagccta ttagttttttt
1200
gctgatggct taagcagata tacattggaa tctactgcct ctataaagc aaaatgcaag
1260
ctctcagggg ctcagtgtg caaagatgta tgcaccggtc tgggaccata ccaaatgcag
1320
ctcaaaatgg aggggaggga aggctgaaaa taactaaatc caacagaatt tgtcatctag
1380
gtacaaagat gctttagtaa cacagcaaaa gagagatgaa atcttgctgt ttgaaagtag
1440
ta
1442
```

```
<210> 6322
<211> 196
<212> PRT
<213> Homo sapiens
```

```
<400> 6322
Met Ser Ser Pro Gly Leu Thr Glu Asn Ser Gln Arg Asp Pro Ser Glu
1               5                   10                  15
Leu Asp Ala Glu His Ala Gln Lys Val Leu Glu Met Glu His Thr Gln
            20                  25                  30
Gln Met Lys Leu Lys Glu Arg Gln Lys Phe Phe Glu Glu Ala Phe Gln
        35                  40                  45
Gln Asp Met Glu Gln Gln Tyr Leu Ser Thr Gly Tyr Leu Gln Ile Ala
    50                  55                  60
Glu Arg Arg Glu Pro Ile Gly Ser Met Ser Ser Met Glu Val Asn Val
65                  70                  75                  80
Asp Met Leu Glu Gln Met Asp Leu Met Asp Ile Ser Asp Gln Glu Ala
                85                  90                  95
Leu Asp Val Phe Leu Asn Ser Gly Gly Glu Glu Asn Thr Val Leu Ser
            100                 105                 110
Pro Ala Leu Gly Pro Glu Ser Ser Thr Cys Gln Asn Glu Ile Thr Leu
        115                 120                 125
Gln Val Pro Asn Pro Ser Glu Leu Arg Ala Lys Pro Pro Ser Ser Ser
    130                 135                 140
Ser Thr Cys Thr Asp Ser Ala Thr Arg Asp Ile Ser Glu Gly Gly Glu
145                 150                 155                 160
Ser Pro Val Val Gln Ser Asp Glu Glu Glu Val Gln Val Asp Thr Ala
                165                 170                 175
Leu Ala Thr Ser His Thr Asp Arg Glu Ala Thr Pro Asp Gly Gly Glu
            180                 185                 190
Asp Ser Asp Ser
        195
```

What is claimed is:

1.   An isolated nucleic acid molecule encoding a polypeptide comprising an amino acid sequence that is at least 85% identical to a polypeptide including an amino acid sequence selected from the group consisting of SEQ ID NO:2n, wherein n is any integer 1-3161, or the complement thereof.

2.   The isolated nucleic acid molecule of claim 1, said molecule hybridizing under stringent conditions to a nucleic acid sequence complementary to a nucleic acid molecule comprising the sequence of nucleotides selected from the group consisting of SEQ ID NO:2n-wherein n is any integer 1-3161, or the complement thereof.

3.   The isolated nucleic acid molecule of claim 1, said molecule encoding a polypeptide comprising the amino acid sequence selected from the group consisting of SEQ II NO: 2n, wherein n is any integer 1-3161, or an amino acid sequence comprising one or more conservative substitutions in the amino acid sequence selected from the group consisting of S ID NO: 2n.

4.   The isolated nucleic acid molecule of claim 1, wherein said molecule encodes polypeptide comprising the amino acid sequence selected from the group consisting of SEQ II NO: 2n, wherein n is any integer 1-3161.

5.   The isolated nucleic acid molecule of claim 1, wherein said molecule comprise the sequence of nucleotides selected from the group consisting of SEQ ID NO:2n-1, wherein any integer 1-3161, or the complement thereof.

6.   An oligonucleotide less than 100 nucleotides in length and comprising at least contiguous nucleotides selected from the group consisting of SEQ ID NO:2n-1, wherein n is a integer 1-3161, or the complement thereof.

7.   A vector comprising the nucleic acid molecule of claim 1.

8.   The vector of claim 7, wherein said vector is an expression vector.

9   A host cell comprising the isolated nucleic acid molecule of claim 1.

10.   A substantially purified polypeptide comprising an amino acid sequence at least 80% identical to a polypeptide comprising the amino acid sequence selected from the group consisting of SEQ ID NO: 2n, wherein n is any integer 1-3161.

11.   The polypeptide of claim 10, wherein said polypeptide comprises the amino acid sequence selected from the group consisting of SEQ ID NO: 2n, wherein n is any integer 1-3161.

12.   An antibody that selectively binds to the polypeptide of claim 10.

13.   A pharmaceutical composition comprising a therapeutically or prophylactically effective amount of a therapeutic selected from the group consisting of:
a)   the nucleic acid of claim 1;
b)   the polypeptide of claim 10; and
c)   the antibody of claim 12;
and a pharmaceutically acceptable carrier.

14.   A kit comprising in one or more containers, a therapeutically or prophylactically effective amount of the pharmaceutical composition of claim 13.

15.   A method of producing the polypeptide of claim 10, said method comprising culturing the host cell of claim 9 under conditions in which the nucleic acid molecule is expressed.

16.   A method of detecting the presence of the polypeptide of claim 10 in a sample, comprising contacting the sample with a compound that selectively binds to said polypeptide under conditions allowing the formation of a complex between said polypeptide and said

compound, and detecting said complex, if present, thereby identifying said polypeptide in said sample.

17.   A method of detecting the presence of a nucleic acid molecule of claim 1 in a sample, the method comprising contacting the sample with a nucleic acid probe or primer that selectively binds to the nucleic acid molecule and determining whether the nucleic acid probe or primer bound to the nucleic acid molecule of claim 1 is present in the sample.

18.   A method for modulating the activity of the polypeptide of claim 10, the method comprising contacting a cell sample comprising the polypeptide of claim 10 with a compound that binds to said polypeptide in an amount sufficient to modulate the activity of the polypeptide.

19.   The use of a therapeutic in the manufacture of a medicament for treating a syndrome associated with a ORFX-associated disorder, wherein said therapeutic is selected from the group consisting of:

a)   the nucleic acid of claim 1;

b)   the polypeptide of claim 10; and

c)   the antibody of claim 12.

20.   A method for screening for a modulator of activity or of latency or predisposition to an ORFX-associated disorder, said method comprising:

a)   contacting a test compound with the polypeptide of claim 10; and

b)   determining if said test compound binds to said polypeptide,

wherein binding of said test compound to said polypeptide indicates the test compound is a modulator of activity or of latency or predisposition to an ORFX-associated disorder.

21.   A method for screening for a modulator of activity or of latency or predisposition to an ORFX-associated disorder, said method comprising:

a)   administering a test compound to a test subject at an increased risk ORFX-associated disorder, wherein said test subject recombinantly expresses a polypeptide encoded by the nucleotide of claim 1;

b)   measuring expression the activity of said protein in said test subject;

c)   measuring the activity of said protein in a control subject that recombinantly expresses said protein and is not at increased risk for an ORFX-associated disorder; and

d)   comparing expression of said protein in said test subject and said control subject, wherein a change in the activity of said protein in said test subject relative to said control subject indicates the test compound is a modulator or of latency of predispostition to an ORFX-associated disorder.

22.   The method of claim 20, wherein said test animal is a recombinant test animal that expresses a test protein transgene or expresses said transgene under the control of a promoter at an increased level relative to a wild-type test animal, and wherein said promoter is not the native gene promoter of said transgene.

23.   A method for determining the presence of or predisposition to a disease associated with altered levels of a polypeptide of claim 11 in a subject, the method comprising:

a)   measuring the amount of the polypeptide in a sample from said subject; and

b)   comparing the amount of said polypeptide in step (a) to the amount of the polypeptide present in a control sample,

wherein an alteration in the level of the polypeptide in step (a) as compared to the control sample indicates the presence of or predisposition to a disease in said subject.

24.   The method of claim 23, wherein said subject is a human.

25.   A method for determining the presence of or predisposition to a disease associated with altered levels the nucleic acid molecule of claim 1 in a subject, the method comprising:

a)   measuring the amount of the nucleic acid in a sample from the mammalian subject; and

b)   comparing the amount of said nucleic acid in step (a) to the amount of the nucleic acid present in a control sample,

wherein an alteration in the level of the nucleic acid in step (a) as compared to the cor sample indicates the presence of or predisposition to said disease in said subject.

26.   The method of claim 25, wherein said subject is a human.

27.   A method of treating or preventing a pathological condition associated with an ORFX-associated disorder in a subject, the method comprising administering to said subject polypeptide of claim 10 in an amount sufficient to alleviate or prevent said pathological condition.

28.   The method of claim 27, wherein said subject is a human.

29.   A method of treating or preventing a pathological condition associated with an ORFX-associated disorder in a subject, the method comprising administering to said subject nucleic acid molecule of claim 1 in an amount sufficient to alleviate or prevent said patholog condition.

30.   The method of claim 29, wherein said subject is a human.

31.   A method of treating or preventing a pathological condition associated with an ORFX-associated disorder in a subject, the method comprising administering to said subject antibody of claim 12 in an amount sufficient to alleviate or prevent said pathological conditic

32.   The method of claim 31, wherein said subject is a human.